DOCUMENT RESUME

ED 439 536 EC 307 715

AUTHOR Fisher, Maurice D., Ed.
TITLE Gifted Education Press Quarterly, 1999.
PUB DATE 1999-00-00
NOTE 49p.
AVAILABLE FROM Gifted Education Press Quarterly, 10201 Yuma Court, P.O. Box 1586, Manassas, VA 20108 ($22 for lifetime subscription). Tel: 703-369-5017; Web site: http://www.cais.com/gep.
PUB TYPE Collected Works - Serials (022) -- Guides - Non-Classroom (055)
JOURNAL CIT Gifted Education Press Quarterly; v13 n1-4 1999
EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Academically Gifted; Comparative Education; Elementary Secondary Education; *Gifted; Gifted Disabled; Intelligence; Literature; Mathematics; Sex Differences; *Teaching Methods; Underachievement

ABSTRACT

This document consists of the four 1999 issues of a quarterly newsletter publication on gifted education. Issues regularly include major articles, book reviews, announcements, and letters. The major articles in these issues are: "The Mathematically Gifted: Bridging the Gender Gap" (Lynn H. Fox and Janet F. Soller); "Parenting for Education: Underachievers Clash with Society's Norms" (Vivian W. Owens); "Using Poetry To Enrich the Sensibility of Gifted Children" (Michael E. Walters); "Hope and Help for the Gifted Who Are Learning Disabled" (Lynn H. Fox); "Further Uses of Quotations To Challenge Gifted Students" (Ross Butchart); "The Borders of Intelligence" (Howard Gardner); "Gifted Students + Laughter = Learning - Stress" (Dan Holt); "Extraordinary Education for Positively Extraordinary Persons" (Virgil S. Ward); "Why Gifted Students Should Read Historical Fiction: Two Current Lessons" (Michael E. Walters); and "The American Education System: A Look from the Inside" (Mikhail Pekker). (Individual articles contain references.) (DB)

Reproductions supplied by EDRS are the best that can be made
from the original document.

ED 439 536

GIFTED EDUCATION PRESS QUARTERLY

VOLUME 13, NUMBER 1, WINTER 1999

VOLUME 13, NUMBER 2, SPRING 1999

VOLUME 13, NUMBER 3, SUMMER 1999

VOLUME 13, NUMBER 4, FALL 1999

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

✓ This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

Fisher

EC 307715

BEST COPY AVAILABLE

GIFTED EDUCATION PRESS QUARTERLY

10201 YUMA COURT
P.O. BOX 1586
MANASSAS, VA 20108
703-369-5017

WINTER 1999
VOLUME THIRTEEN, NUMBER ONE

LIFETIME SUBSCRIPTION: $22.00

http://www.cais.com/gep

MEMBERS OF NATIONAL ADVISORY PANEL

Dr. James Delisle – Professor and Co-Director of *SENG*, Kent State University, Kent, Ohio

Dr. Jerry Flack - Professor, University of Colorado, Colorado Springs

Dr. Howard Gardner – Professor, Graduate School of Education, Harvard University, Cambridge, Massachusetts

Ms. Diane D. Grybek - Supervisor of Secondary Gifted Programs (Retired), Hillsborough County Schools, Tampa, Florida

Ms. Dorothy Knopper - Publisher, Open Space Communications, Boulder, Colorado

Mr. James LoGiudice - Director, Program and Staff Development, Bucks County, Pennsylvania IU No. 22 and Past President of the Pennsylvania Association for Gifted Education

Dr. Mary Meeker – President of SOI Systems, Vida, Oregon

Dr. Adrienne O'Neill – Johnson & Wales University, Providence, Rhode Island

Dr. Stephen Schroeder-Davis – Coordinator of Gifted Programs, Elk River, Minnesota Schools and, Past President of the Minnesota Council for the Gifted and Talented

Dr. Bruce Shore – Professor and Director, Giftedness Centre, McGill University, Montreal

Ms. Joan Smutny - Professor and Director, Center for Gifted, National-Louis University, Evanston, Illinois

Dr. Virgil S. Ward – Emeritus Professor of Gifted Education, University of Virginia, Charlottesville, Virginia

Ms. Susan Winebrenner - Consultant, Brooklyn, Michigan

Dr. Ellen Winner – Professor of Psychology, Boston College

Happy New Year! Shortly before our thirteenth year of publishing this quarterly, I reviewed the topics covered in previous issues to remind myself of where we have been. ("If you want the present to be different from the past, study the past." Baruch Spinoza). During these previous years, our authors have addressed many recurring problems in the gifted field that still need further refinement to have a significant impact on the identification and education of gifted children. The most frequently occurring problem examined in ***GEPQ*** articles, beginning with Vol. 1, No. 1 in April 1987, has concentrated on designing a proper curriculum for the gifted. Several authors have stressed the design of a rigorous humanities curriculum involving the integration of subjects into comprehensive studies of literature, philosophy, history, languages, mathematics, the sciences, the arts and music. Obviously, the curriculum issue is still vital to gifted education programs, and there is considerably more work ahead in fulfilling the promise of a differentiated curriculum as originally proposed by Virgil Ward and Harry Passow in the 1960's and 1970's.

Another important topic that has been addressed in this quarterly many times over the last several years has been concerned with identifying children for gifted education programs. The problems of testing children to determine whether they are gifted was most recently discussed by Linda Silverman in two issues of Vol. 12, and Howard Gardner discussed the importance of studying Multiple Intelligences in two issues of Vol. 11. I believe that significant progress in identifying and educating the gifted will be made by using an MI approach. But "the culture of identification" has been locked into the seventy year old Terman concept of a single IQ score, and is currently reinforced by teacher training programs, multi-billion dollar testing companies, state regulations for identifying the gifted and school district testing programs. Ironically, the gifted education community seems to be the most difficult group to change from viewing children as having a single ability (the "g" factor based on the IQ score) to viewing them as having several different abilities (e.g., verbal-linguistic, visual-spatial or naturalist).

Other recurring topics our authors have written about during the last decade are: (1) the education of young gifted children; (2) parent advocacy for improving gifted education programs; (3) studies of discrimination against the gifted; (4) identifying minority children who are gifted; (5) analysis of potentially harmful educational approaches such as cooperative learning and inclusion; and (6) biographical studies of giftedness and sensibility.

After re-reading approximately 500 pages of essays and commentaries

Continued on page 12 --

THE MATHEMATICALLY GIFTED: BRIDGING THE GENDER GAP

BY LYNN H. FOX & JANET F. SOLLER
AMERICAN UNIVERSITY

In a study of mathematically gifted students begun in 1971, gender differences loomed large (Astin, 1974; Fox & Cohn, 1980). Not only were there far more boys than girls identified as mathematically gifted, those girls who were identified were more reluctant than the boys to move ahead in mathematics, and less likely to want a scientific career (Fox, 1977; 1982). Even relatively high-scoring girls in a mathematics talent search expressed lower levels of self-esteem with respect to mathematics than their male counterparts. Some of the girls who did attempt to accelerate reported low levels of support from teachers (Fox, 1982). But that was then and this is now. After all, it has been over 25 years since the passage of Title IX, legislation aimed at eliminating gender discrimination in education. As we move into the new millenium can we say that the gender gap in gifted education has been bridged? In this article we will examine the status of the gender gap in achievement in mathematics, science, and technology among the gifted, particularly the mathematically gifted, and consider the direction for research and interventions.

Is There a Gender Gap?

Today the gender gap in employment in science and technology is so great that legislation has been proposed that would create a commission to study the "crisis." This gender gap cuts across all levels of employment, most areas of science and technology, and all ethnic groups. A few basic statistics cited in H.R. 3007 (1998) are as follows:

- Women represent approximately 50 percent of the workforce but only 22 percent of the science and engineering workforce.
- The percentage of women in engineering is less than 10%.
- There has been a 50 percent decrease in the numbers of women pursuing computer science degrees between 1986 and 1994. Percentages of women employed in selected careers in 1983 and 1996 as shown in Table 1 (p. 5) illustrate the disparity in employment. While there has been some change, there are still enormous differences in engineering and computer sciences. Those women who are employed in technical fields are still clustered in the lower levels within fields. For example, the percentages of women entering the medical professions has risen, but the increase is greater for physician assistants than for physicians, and nursing remains a largely female field. Female dental hygienists are numerous but female dentists are rare. Women are more readily found in careers in drafting than in engineering.

WHAT ARE THE BARRIERS?

Exactly why so few women choose careers in technical areas, especially why gifted women avoid the peak demand professions, is not clear. Hanson (1996) looked at several different longitudinal studies that followed young women's course taking, attitudes, and career choices from high school through college into careers. One reason some young women gave for dropping out of the science and mathematics pipeline was their perception of the workplaces in science and technology as hostile environments for women. Some students commented on the lack of mentors and role models. A professor of biology explained to us how these two barriers operate together to discourage women: first, most of the professors are male and many are reluctant to mentor a female student, (especially if that means meeting with her at all hours of the day and night to check on the progress of experiments), and second, professors worry that it is dangerous for young women to walk around campus late at night to check on their lab experiments.

Balancing Career and Family

Some young women expressed concern about balancing the role of parent with a career in mathematics and science (Hanson, 1996). Subotnik and Arnold (1996) studied very gifted women in science and concluded that many chose careers in medicine over other science careers because of the belief that they could combine family and their career more easily that way. In a study of gifted middle school students, medicine was the top career choice for girls while boys were more likely to choose other science careers over medicine. Interestingly in that study gifted girls said they expected to have careers while married with children, whereas the gifted boys expected their wives would stay at home once they had children (Reis, Callahan, & Goldsmith, 1996).

Gifted girls' concern with a balanced life surfaces in other ways. In a study of gifted students who attended special schools for mathematics, science, and technology, almost every girl reported having some concerns about the program to the extent of wanting to leave. The reasons given were the limited options for female sports and the lack of choices for outside of school recreational activities (Callahan et al., 1996). Measures of values and vocational interest given to mathematically gifted youth revealed that more boys had an overwhelming commitment to investigative occupations and theoretical values, whereas the girls had a broad mixture of investigative, social, and artistic interests (Fox, 1982).

Course-taking Patterns

One thing is clear, the pattern of choices that take girls out of the mathematics, technology and science pipeline begins in high school (or even earlier) and continues throughout undergraduate

and graduate training. Course taking, specifically advanced mathematics and physics in high school, is the ultimate gatekeeper. Once students chose to opt out of the "fast track" the doors to engineering and science careers close. One study found a fourth of the boys but only a tenth of the girls expressed an interest in science by the sophomore year of high school (Shakhashire, 1990). While the gender gap in course taking for the gifted has been narrowing, there are some remaining concerns: courses in technology and physics, especially Advanced Placement Physics (Condition of Education, 1995).

The fact that the course-taking gap in high school has been almost eradicated would be cause for some celebration if it were not for some puzzling differences among the gifted student population. First, gifted males still outperform gifted females on achievement tests. Secondly, females are not choosing science and technology majors in college in proportion to the males. Can we explain the test score gap?

Data on achievement test scores, more readily available for the general population, than for gifted per se, show mixed results. The National Assessment of Educational Progress in the United States reports a decrease in the gender gap from previous years, but girls still score lower in science by seventh grade and the gender gap is largest among the high scorers (NCES, 1997). The most persistent and puzzling gaps seem to be among students at the high school and college level where scores on the SAT and GRE continue to show large differences in favor of males (NCES, 1997). Related to this problem are the continuing differences in the numbers of males identified as mathematically precocious in grade seven through national talent searches (Stanley, 1988).

It has been suggested that these test performance differences are somehow artifacts of either the tests themselves or girls' test taking strategies rather than evidence of true achievement differences. The test results underestimate females' true knowledge due to factors such as lower levels of self-confidence that in turn inhibits their performance. For example, girls are less likely to guess on the basis of partial knowledge. A few studies of college students report that the SAT under-predicts women's success in mathematics courses (Wainer & Steinberg, 1992; Stricker, Rock, & Burton, 1993).

A more serious charge is that differential test performance bespeaks differences in learning in the classroom. Becker (1990) reported that on a mathematics test, gifted boys performed better than gifted girls on problems which required knowledge of specific algorithms from Algebra, while gifted girls actually performed better on mathematical reasoning problems that were unrelated to the curriculum. Similar results were reported by Mills, Ablard, and Stumpf (1993) for young gifted children where the girls scored higher on the more generic mathematical reasoning problems, while the boys did better on the problems using algorithms taught in school.

Sadker and Sadker (1994) summarized a large number of studies that point to differential treatment of boys and girls in school. Two studies undertaken by the American Association of University Woman ' (AAUW) further demonstrated the differences in educational experiences of boys and girls in the United States (AAUW, 1992;1995). In brief, there is compelling evidence that teachers interact more with boys than with girls and that there are qualitative differences in the interactions in favor of boys. For example, Fox (1996) described a seventh grade accelerated mathematics class where all the boys sat on one side of the room and the teacher inadvertently taught to that side only. Ironically gifted boys are more likely to notice the bias against girls than the gifted girls themselves (Feldhusen & Willard-Holt 1993).

It has also been suggested that the performance gap on standardized tests is a result of differential learning of mathematics and science outside of school. For example, when courses are optional as they are in most summer enrichment programs for gifted children, boys are more likely than girls to select the mathematics, physical science and computer options (Stocking & Goldstein, 1992). Even though girls are participating more in science fairs than in the past, they are less likely than boys to do projects in mathematics or physical sciences (Greenfield, 1995). A comparison of gifted boys and girls as early as grades 3 and 4 in the United States and Japan shows differences in leisure time pursuit with boys more likely to be involved with sports and with computers than girls at this age (Fox & Peak, in preparation). Exactly how these outside of school experiences prepare boys for tests has not been explicitly documented.

Attrition by Degrees

In 1977 more men than women earned post-secondary degrees at every level. By 1992 more women than men earned Bachelor's and Master's degrees. Men, however, continue to earn more doctoral and professional degrees in law and medicine (U.S. Bureau of Census, 1997). Women are still the majority among education majors, but men earn far more degrees in mathematics, physical sciences, computer sciences, and engineering. At the graduate level, men are six times more likely than women to get a master's degree in engineering and three times more likely to get a master's in computer science.

Among mathematically gifted girls, preferences for mathematical or scientific careers decreased dramatically between the high school and college years. Longitudinal studies of mathematically precocious youth found that while as many as 59 percent of the girls in high school were thinking about majoring in mathematics or science in college, only 37 percent of the girls actually did so. For the gifted boys the decline was from 71 percent to 59 percent (Eccles & Harold, 1992). The gap was greatest for those planning versus actually majoring in physics, computer science, or engineering.

Research on social factors that influence the career and college choices of gifted women suggest several factors that encourage gifted women to stay in the science pipeline. Parental support and encouragement are important (Fox, 1982). Girls who had fathers employed in technical areas were more likely to persist than were girls who felt they had strong encouragement from both parents (Montgomery & Benbow, 1992). Female mathematicians often point to encouragement from parents and teachers (Helson 1980; Luchins & Luchins, 1980). Arnold (1995) noted that access to role models was a critical factor in the pursuit of science careers by female high school valedictorians. Alas, gifted girls report less contact with female role models from science and computer science fields than their male counterparts (Fox, 1982).

Can the Tide be Turned?

Role Models

In the late seventies the National Science Foundation funded a number of projects aimed at encouraging more female participation in science. An evaluation across all the different types of interventions concluded that the most powerful programs were those that focused on access to role models (Lantz, West & Elliot, 1976). One of the few experimental studies ever conducted with mathematically gifted girls found that a three week summer career exploration program for eighth-graders was highly successful in promoting the girls' choice of and persistence in science-related college majors and careers as late as their junior year of college (Fox, Benbow & Perkins, 1983).

Teaching Methods

There are many other recommendations for encouraging girls to pursue more mathematics and science, the results of which are less well-documented than access to role modes. For example the use of cooperative learning strategies has been recommended as beneficial for girls (Dillow, Flack & Peterman, 1994). Studies show that both boys and girls are likely to do well with this teaching approach, but the group dynamics need to be monitored (Holden, 1993). Unfortunately, these techniques are more likely to be employed in remedial science classes than in advanced courses for the gifted (Burkham, Lee & Smerdon, 1997).

Studies of teachers' uses of computers in the classroom show great diversity. Some teachers keep the machines for optional use much like a book nook for free choice time. In these classrooms girls are less likely than boys to use the computers. When everyone is required to work with computers, few gender differences are found in proficiency or interest (Lockheed, 1985). Creating a non-sexist classroom may be critical for girls in science, mathematics, and technology courses where girls feel more intimidated.

Single-Sex Schooling

Does the single-sex environment help bridge the gender gap for mathematically gifted girls? Riordan (1994) found those private all-girls Catholic schools in the United States foster academic success as well as high self-confidence. The success of segregation may be a function of subject matter. Girls in all-girl mathematics and science classes identify these subjects as "less masculine" thereby avoiding traditional sex stereotyping. (Haag, 1998).

In many cases single-sex education not only separates the sexes but it often employs different teaching methods and more reliance on cooperative learning groups than coeducational classes. It could be that teaching methods, more than segregation of the sexes, account for the differences in performance. One study of a physics class suggests that this may be the case. When the physics teacher transferred his methods from an all-girl class to a co-ed class, he had the same success with the girls without any decrease in success for boys.

The most compelling research in favor of single-sex education is in undergraduate college education. Women are more likely to graduate, more likely to pursue graduate studies (Tidball, 1980), more likely to experience student leadership (Mael, 1998), more likely to have higher career aspirations, and more likely to be listed in *Who's Who of American Women* than their counterparts from coed colleges (Riordan, 1994).

Not all studies conclude that single-sex environments result in positive outcomes for girls. Clearly, some of the studies find negative outcomes for boys (Haag, 1998). Arguments against single-sex schools from feminists maintain that separate is not equal and history has taught us that there is a risk of water-downed curriculum, or less well-trained teachers for girls (Sadker & Sadker, 1994).

Is More Research Needed?

Although there are many different types of programs for gifted students, few have been studied explicitly in terms of their impact on the career outcomes for gifted girls. As Reis and Callahan (1989) noted, studies of gender differences among the gifted have too often focused on the characteristics of the girls rather than the factors in their environments that have impacted their achievement and interests. Unfortunately, most efforts to improve female performance and interest in mathematics and science are one-shot efforts or efforts with weak evaluation components. Clearly, there is a need to determine the types of interventions that are necessary to encourage women to pursue careers in science and technology. Research may also be needed to determine how to restructure some work environments to make them more accessible to gifted women. Employers may need to offer more flexible career options and on-site daycare in order to recruit more gifted women.

More research on single-sex education, especially pre-college programs for gifted girls, is certainly needed. There are numerous problems in studying this issue. For example, it has been argued that self-selection may play a part so that more academically motivated girls choose single sex colleges. Other variables that may confound results are type of school, socioeconomic status, educational background of the mother, methods of pedagogy in the classroom, and differences in curriculum to name a few (Smith, 1995). It is also difficult to summarize across current studies because of the differences in measures of impact from one study to the next. More systematic research controlling for a large variety of variables is needed to sort out the true impact of single-sex education

Conclusions

Society is becoming increasingly technologically complex. The "best and the brightest" minds today will be facing enormous challenges as they grapple with cloning and genetic manipulations. Engineering and information systems design and management are in need of talent. Science and mathematics classrooms at every grade level are calling for qualified teachers. Roughly half of the work force in the United States, half of the brightest, are women. Yet these women are choosing not to pursue the study of these technical fields. Some say they are being driven away from these pursuits long before they graduate from high school. There is a clear need for gifted and talented programs designed to actively recruit women to the world of science and technology. Although there are some unresolved issues, a few successful program models have been implemented that point the way for change.

Table 1: Percentages of Women by Employment Field and Year

Employed Civilians by Occupation	Percentage of women in this occupation in *1983*	Percentage of women in this occupation in *1996*
Architects	12.7	16.7
Engineers	5.8	8.5
Drafting occupations	17.5	20.9
Natural Scientists	20.5	29.3
Science Technicians	29.1	37.4
Computer systems analysts, scientists	27.8	28.1
Computer Programmers	32.5	30.8
Physicians	15.8	26.4
Physicians Assistants	36.3	55.9
Registered Nurses	95.8	98.2
Dentists	6.7	13.7
Dentist Hygienists	98.6	98.2

Source: U. S. Bureau of the Census, *Statistical Abstract of the U. S. :1997* (117th ed.) Washinton, D. C. 1997.

Figure I: INTERNET Sites of Interest for Educators Working with Gifted Girls

American Assoc. of University Women	www.aauw.org/index.html
Women's College Coalition	www.academics.org/
Society of Women Engineers	www.swe.org/SWE/others.html
Women of NASA	www.quest.arc.nasa.gov/women/intro.html
Women's Educational Equity Act	www.edc.org/WomensEquity/index.html

REFERENCES

American Association of University Women. (1992). **The AAUW Report: How Schools Shortchange Girls.** Washington, D.C.: American Association of University Women.

American Association of University Women (1995). **Hostile Hallways: The AAUW Survey on Sexual Harassment in America's Schools.** Washington, D.C.: American Association of University Women.

Arnold, K. D. (1995). **Lives of Promise: What Becomes of High School Valedictorians: A Fourteen-year Study of Achievement and Life Choices.** San Francisco: Jossey-Bass.

Astin, H.S. (1974). Sex differences in mathematical and scientific precocity. In **Mathematical Talent: Discovery, Description, and Development**. (pp70-86). J.C. Stanley; D.P. Keating; and L.H. Fox, (eds.) Baltimore MD: Johns Hopkins University Press.

Becker, B.J. (1990). Item characteristics and gender differences in the SAT-M for mathematically able youths. **American Educational Research Journal**, 27, 65-87.

Burkham, D.T., Lee, V.E., & Smerdon, A. (1997). Gender and sceince learning early in high school: Subject matter and laboratory experience. **American Educational Research Journal**, 34, 297-332.

Callahan, C.M., Adams, C.M., Bland, L.C., Moon, T.R., Moore, S.D., Perie, M., McIntire, J.A. (1996). Factors influencing recruitment, enrollment, and retention of young women in special secondary schools in mathematics, science, and technology. **Remarkable Women: Perspectives on Female Talent Development** (pp 225-242). K. Arnold, D. Noble, and R.F. Subotnik. (Eds). Cresskill, New Jersey: Hampton Press, Inc.

Commission on the Advancement of Women and Minorities in Science, Engineering, and Technology Development Act. H.R. 3007, 105th Congress, Fall Session. (1998).

Dillow, K., Flack, M., and Peterman, F. (1994). Cooperative learning and the acheivement of female students. **Middle School Journal**, 26, 48-51.

Eccles, J. S. & Harold, R. D. (1992). Gender differences in educational and occupational patterns among the gifted. In N. Coangelo, S.G. Assouline, & D.L. Ambroson (Eds.), **Talent Development: Proceedings from the 1991 Henry B. And Jocelyn Wallace National Research Symposium on Talent Development**. Unionville, N.Y.: Trillium Press.

Feldhusen, J. F. & Willard-Holt, C. (1993). Gender differences in classroom interactions and career aspirations of gifted students. **Contemporary Educational Psychology**, 18, 355-362.

Fox, L.H. (1977). The effects of sex role socialization on mathematics participation and achievement. In **Women and mathematics: Research perspectives for change.** Washington, D.C. (National Institute of Education Papers in Education and Work, No. 8, 1977).

Fox, L. H. (1982). The study of social processes that inhibit or enhance the development of competence and interest in mathematics among highly able young women. Eric Resources Information Center. (ERIC documentation number ED 222 037.)

Fox, L. H. (1996). Gender and the self-fulfilling prophecy. In R. T. Tauber,(Ed.) **The Self-Fulfilling Prophecy: A Practical Guide to its use in Education**, Westport, CT: Praeger.

Fox, L.H., Benbow, C.P., & Perkins, S. (1983). An accelerated mathematics program for girls: A longitudinal evaluation. In C.P. Benbow & J.C. Stanley (Eds.) **Academic Precocity: Aspects of its Development**. Baltimore, MD: The Johns Hopkins University Press.

Fox, L.H. & Cohn, S.J. (1980). Sex differences in the development of precocious mathematical talent. In L.H. Fox, L. Brody, & D. Tobin (Eds.) **Women and the Mathematical Mystique** (pp. 94-111), Baltimore, MD: The Johns Hopkins University Press.

Fox, L.H. & Peak. (In preparation). An exploratory look at social factors and mathematics achievement: Cross-cultural perspectives from TIMSS.

Greenfield, T.A. (1995). An exploration of gender participation patterns in science competitions. **Journal of Research in Science Teaching**, 32 (September), 735-748.

Haag, P. (1998). Single-sex education in grades K-12: What does the research tell us? **Separated by Sex: A Critical Look at Single-sex Education for Girls.** Washington, D.C.: American Association of University Women.

Hanson, S. L. 1996. **Lost Talent: Women in the Sciences**. Philadelphia: Temple University Press.

Helson, R. (1980). The creative women mathematician. In L.H. Fox, L. Brody, and D. Tobin (Eds.) **Women and the Mathematical Mystique** (pp. 23-54). Baltimore, MD: The Johns Hopkins University Press.

Holden, C. (1993). Giving girls a chance: Patterns of talk in cooperative group work. **Gender and Education**, 5, 179-189.

Lantz, A., West, A.S., & Elliot, L. (1976). An impact analysis of sponsored projects to increase the participation of women in careers in science and technology. **Report to the National Science Foundation**, June, 1976, Contract No. C-1053.

Lockheed, M.E. (1985). Women, girls, and computers: A first look at the evidence. **Sex Roles**, 13, 115-121.

Luchins, E.H., & Luchins, A.B. (1980). Female mathematicians: A contemporary appraisal. In L.H. Fox, L. Brody, & D. Tobin (Eds.) **Women and the Mathematical Mystique** (pp. 7-22), Baltimore, MD: The Johns Hopkins University Press.

Mael, F.A. (1998). Single-sex and coeducational schooling: Relationships to socioemotional and academic development. **Rev. of Educational Research**, 68 (2), 101-129.

Mills, C. J., Ablard, K. E., & Stumpf, H. (1993). Gender differences in academically talented young students' mathematical reasoning: Patterns across age and subskills. **Journal of Educational Psychology**, 85, 340-346.

Montgomery, J. L. & Benbow, C.P. (1992)Factors that influence the career aspirations of mathematically precocious females. In N. Coangelo, S.G. Assouline, & D.L. Ambroson (Eds.), **Talent Development: Proceedings from the 1991 Henry B. And Jocelyn Wallace National Research Symposium on Talent Development**. Unionville, N.Y.: Trillium Press.

National Center for Education Statistics. (1994). **Digest of Education Statistics**, 1994. Washington, DC: U.S. Department of Education, Office of Educational Research and Development. (ERIC Document Reproduction Service No. ED 377 253)

Reis, S. M., & Callahan, C. M. (1989). Gifted females: They've come a long way – or have they? **Journal for the Education of the Gifted**, 12, 99-117.

Reis, S.M., Callahan, C.M., & Goldstein, D. (1996). Attitudes of adolescent gifted girls and boys toward education, achievement, and the future. In K. Arnold, D. Noble, and R.F. Subotnik (Eds.) **Remarkable Women: Perspectives on Female Talent Development** (pp 209-224). Cresskill, New Jersey: Hampton Press, Inc.

Riordan, C. (1994). The value of attending a women's college: Education, occupation, and income benefits. **Journal of Higher Education**, 65, 486-510.

Sadker, M., & Sadker, D. (1994). **Failing at fairness: How America's schools cheat girls.** New York: Charles Scribner's Sons.

Shakhashire, B. (1990). U.S. Science Education. In **Human resources in Science and Technology: Improving U.S. Competitiveness.** (pp 59-69), Washington, D.C.: Commission on Professionals in Science and Technology.

Smith, I.D. (1995). Project: Gender differentiation: Gender differences in academic achievement and self-concept in coeducational and single-sex schools. **Final Report: Australian Council.** Sydney: New Prospects, Inc.

Stanley, J.C. (1988). Some characteristics of SMPY'S 700-800 on SAT-M before the age 13 group: Youths who reason extremely well mathematically. **Gifted Child Quarterly**, 32, 205-209.

Stocking, V.B. & Goldstein, D. (1992). Course selection and performance of very high ability students: Is there a gender gap? Paper presented at the annual meeting of the American Education Research Association, San Francisco.

Stricker, L. J., Rock, D. A., & Burton, N. W. (1993). Sex differences in predictions of college grades from scholastic aptitude test scores. **Journal of Educational Psychology**, 85, 710-718.

Subotnik, R.F., & Arnold, K.D. (1996). Success and sacrifice: The costs of talent fulfillment for women in science. K. Arnold, K.D. Noble, & R.F. Subotnik (Eds.) **Remarkable Women: Perspectives on Female Talent Development** (pp. 263-280). Cresskill, New Jersey: Hampton Press, Inc.

Tidball, M.E. (1980). Women's Colleges and Women Achievers Revisited. **Signs: Journal of Women in Culture and Society**, 5 (3), 504-517.

U.S. Bureau of the Census (1997). **Statistical Abstract of the United States 1997** (117th edition). Washington, D.C.: U.S. Government Printing Office.

U. S. Department of Education, National Center for Education Statistics (NCES). (1995). **The Condition of Education 1995**. Washington, D. C.: U.S. Printing Office.

U. S. Department of Education, National Center for Education Statistics (NCES). (1997). **The Condition of Education 1997.** Washington, D. C.: U.S. Government Printing Office.

U.S. Department of Education, National Center for Education Statistics (NCES). (1997). No. 11: Women in mathematics and science. **The Condition of education, NCES 92-97.** Washington, D.C.: U.S. Government Printing Office.

Wainer, H., & Steinberg, L. S. (1992). Sex differences in performance on the mathematics section of the scholastic aptitude test: A bidirectional validity study. **Harvard Educational Review**, 62, 323-336. ⇨⇨⇨

PARENTING FOR EDUCATION: UNDERACHIEVERS CLASH WITH SOCIETY'S NORMS

BY VIVIAN W. OWENS **ESCHAR PUBLICATIONS**

On Thursday, May 7, Matt stood before his chemistry class and reported the results of an experiment on determining the molal boiling point of a solution. Confident and assured of his understanding of colligative properties, he showed graphs from the computer and pointed out the steepening curve related to additions of salt to the solution. Before closing, he asked for questions and answered with the thoroughness of an old pro.

Fifteen year-old Matt smiled with pleasure as the class clapped for his presentation. An outsider looking in would not have recognized him as an underachiever. Nonetheless, one month earlier Matt slid on the down slope drive to failure, known well by most underachievers.

Today, moments before class started, Matt walked in and

BEST COPY AVAILABLE

showed the teacher his neatly typed report. She feigned surprise but quickly showed pleasure as she voiced approval for the calculations and text of his report. One month earlier on a Friday, the teacher had kept him after class to issue this ultimatum: "Get your notebook organized this weekend. It's affecting your total output in class. You have no notes for reference. You don't know where anything is. Matt, you're too bright to continue this poor work you do every day. If things don't change, I'm taking some drastic steps."

When he arrived the following Monday, Matt showed off the newly organized notebook. He had made a strong attempt to begin improvement. Having studied his behavior and performance throughout the course, his teacher knew any improvement could become short-lived. What could sustain his upward spiral? With certainty, she knew that Matt took deep pleasure in performing labs, and she used this to bring him to fuller intellectual growth, as she encouraged his consistent attention to all requirements for the class.

During the month prior to his presentation, Matt often butted heads with the teacher. He resented her watchful eye and her insistence on completing former assignments. Why couldn't she just give him the "F", he wondered. Slowly, he made changes—shifts in his own attitude toward his own abilities.

Matt is not alone as an underachiever in his chemistry classroom, and he's not alone among any group of young people anywhere. His tendencies toward lower performance than natural ability began in elementary or middle school, and simply magnified during high school.

Parents sigh and sometimes weep over failing grades made by their gifted children. Tests suggested great things lay ahead, but instead the tide only ebbs away, leaving these learners further and further behind. They clash with the norms in society; they clash with their parents' high hopes, and quite often they clash with their own hopes and dreams. They are labeled "underachievers," because low grades reflect the work of less capable students. However, IQ and aptitude scores are higher than these grades indicate.

Often, gifted children experience conflicts with others' expectations of them along with a pace or style of existence not suited to their liking. For example, look at Raena.

Raena said she enjoyed being around people and socializing frequently. From an early age, she preferred a late start to the day; she wanted to take her time and linger over a meal or over a puzzle. Reading should not be rushed, if it is to weave its magic upon her imagination. Tinkering with old radios, repairing them to work properly needed an hour-less clock.

In the classroom, Raena was given one half-hour to an hour to take a test, just as everyone else. On a history project, she required one week in addition to the allotted two days. Demands and competitiveness of academic courses taxed her free time, limiting breezy interludes with her fun-loving friends.

'That's why I'm taking lower level classes," said Raena. "Let the geeks labor after class on homework. I don't want to spend my free time studying and chasing high grades for hard classes."

Having managed to wriggle her way out of academic, college-bound courses, Raena said she was able to work steadily in class, make good grades, and never worry about school matters beyond school walls. This felt like happiness to her. Unfortunately, her parents held different hopes and dreams for her. Their expectations clashed with hers.

Is there a method of reconciling Raena's parents' expectations with her own? Is there a schemata schools can adopt to allow for the full blossoming of the Raenas of the world?

" I want to think about this...I want to test this...I want to create..."

Creative intellectuals sometimes travel in a time frame out of synch with the rest of the world. The story goes that Thomas Edison stopped his "invention time " for a few hours nap daily, then resumed. Apparently, he viewed time the same as Raena. He wanted no stop watches to end or to begin activities. Could a Raena-like perception of time possibly have been the cause of Edison's failure in school?

One of the marks of many gifted learners is their tenacity in discovering through trial and error. They are problem solvers and can stay put for long periods of time, as they go through the process. Hour-less clocks.

Reconciliation for a Raena may come by selectively choosing courses having requirements which permit some flexibility in time completion. With emphasis placed on career paths and higher standards of learning, schools will probably offer more options in achieving goals. Perhaps Raena can negotiate a contract with teachers when she feels an assignment is biased to her pace and lifestyle.

When Raena's parents appeal to her for higher expectations, they owe her a listening ear. Through listening they will find out what kinds of schedules present the least anxiety, and they will also better judge how much farther Raena can stretch at this time in her life. Consultation with guidance counselors may enlighten them on whether Raena's choice of courses will deny her future opportunities.

An evaluation of a school's curricula through the lens of a child's eye-approach to life lead some parents to recognize that

the continued development of their gifted child may require a less stressful schedule and a slowed-down pace suited to the child's natural tendencies or biorhythms. Contrary to popular thought, this does not doom failure. Rather, it can produce a more mentally and emotionally healthy child who will proclaim success at twenty-nine instead of at twenty-three. Is that so bad?

Many parents sitting across from a teacher on parent conference day would say, "Yes. It is bad to not proclaim early success." Sometimes, real anxiety permeates through every thought about underachievers.

Sometimes, the real problem is not knowing how to cope with the underachiever. We cannot burrow beneath the construction of his performance-product ability and interpret it correctly for the preconceived designs set up by society's norms. We repeatedly attempt to shape him to fit these designs, ignoring his own gifts.

All underachievers are not alike.

"Sara only told me about the 95s and 100s she received in math," one mother said, "but she completely ignored the 47 and 64." Indeed! Sara balled up the test papers with grades below "B's". She chose to see what she wanted, deceiving herself and her mother in the process. Perhaps she expected a magic wand to wave away her bad grades.

During elementary school Sara became accustomed to "A's" on her report cards. Her success seemed guaranteed for life. Unfortunately, Sara was so much attuned to interpreting signs of success, she could not /would not recognize the danger signs of failure.

The "Unaware Optimist" is a category of underachievers who are not aware when they're in trouble. Try to catch them before they suffer a serious set-back. Usually, their problem stems from not studying thoroughly, not preparing sufficiently for quizzes or tests, not managing their time and efforts efficiently, and overestimating their knowledge.

Parents of the "Unaware Optimist" have experienced numerous let-downs, thinking Sara was going to make the honor roll, only to find she's barely hanging on by the skin of her teeth. To steer Sara in the right direction, insist on her recording every grade she makes in every subject. Help her acquire the habit of reviewing and analyzing previous quizzes or tests from each subject; this shows her the teacher's style of questioning and where and how emphasis is placed. Monitor Sara's performance on a daily basis, forcing her to admit that work toward grades takes place every day she's in class.

Some experts ask, "How much time does Sara spend outside of the classroom? Does she listen in class, afterward feeling she has understood, and decides she doesn't need to study or do anything extra?"

When parents of the "Unaware Optimist" answer those questions, they often tap the spring of Sara's deception.

For a great number of African American students, problems of underachievement become more complicated. Bliss, an African American child in a 97% white school complained, "I hate my history class. I feel totally isolated when slavery is discussed and portrayed as having been a legitimate enterprise, because it sustained a good livelihood for white farmers. It's hard for me to keep my anger in check..."

If there is no one available in this school for Bliss to open a door for honest exchange, difficulties lie ahead. It would be very easy and very natural to relegate courses, like history, to lesser importance and accept failure. Naturally, Bliss confronts all the other problems normally faced by every teenager.

When students find themselves in such defeating circumstances, the parents' role becomes more crucial. Here, the parents may need to take an action to relieve a child's hurt or a child's burden. This may take place through a parent-teacher conference to discuss course content and the negative effects its presentation is having on Bliss.

With Bliss present, negotiations may take place which would allow her a means to disagree or refute any course material, if she felt comfortable doing so. Another option is for Bliss to take the course under a different teacher or at a nearby community college or arrange an independent study.

Not only do students, like Bliss, fight emotional wars through history or sociology courses, they struggle to simply be recognized as gifted by a system that is determined to classify them by views obtained from the evening news. Consequently, they are not called upon in class; their projects are scrutinized unfavorably, and they are patronized beyond comfort. Little credence is given to their culture or experiences.

Too many gifted African American children crawl away to non-academic priorities in order to survive the school experience, as that experience fails to affirm their intellect. Often, they are unaware of having made a choice to underachieve, for this choice was really the only one presented to them.

Alert parents will oversee Bliss' education. They will encourage, support, and affirm all of her gifts. They will use external resources to compliment her knowledge, but they will also intervene to assist her school in educating her properly and fairly.

One has to feel uneasy about the large number of African American students who will underachieve, for they do not all have Bliss' parents. This group of learners might be called

"Apathetic Underachievers."

Consider Kenny Peterson, another apathetic underachiever.

Kenny Peterson had been knocked down so many times he didn't know how to stand. In fact, he had lost the desire to stand. No, he was not knocked down in a boxing match or a wrestling match, and he was not in a gang fight. Grading systems and other forms of evaluation had knocked down Kenny.

According to IQ tests, Kenny is far above average. His reading and math skills were complimented with good grades until he reached ninth grade. About that time, things started going downhill, due to moving to a new home and family problems. Kenny forgot to turn in his English homework twice; that earned him a "D" the first nine weeks. The second nine weeks, he received "D's" in English, math, and science. His tenth grade year added one more notch in the failure belt. He made a "D" in history as well as in English, math, and science.

By this time, Kenny felt ready to throw in the towel. "What's the use of trying?" he asked his counselor. "I get dumber every year. No matter how hard I try, 'D's' tag me."

Luckily, Kenny's dad kept faith in him. The problem Kenny's dad solved was: How do I encourage him and show him that he can achieve?

Dad was aware that Kenny's self confidence had eroded. Kenny felt overwhelmed by circumstances he did not know how to control.

"Remember the 'A's' you used to get in math?" Dad reminded Kenny. "I always thought you were a natural with numbers."

"Yes! I remember," Kenny replied.

Over and over again, Kenny's dad reminded him of former successes, and over and over again Kenny remembered. Together, Dad and Kenny looked at the reasons for low grades. In many cases, low grades resulted because Kenny had not turned in homework or completed a project. His basic skills were still in the upper region.

Apathetic Kenny changed into energetic, optimistic Kenny. Look at your underachiever. Does he resemble Kenny?

Underachievement knows no racial boundary. Unique situations spawn the growth of particular behaviors that will characterize certain types of underachievers, and this leaves all parents wondering where to go after recognizing that your child is an underachiever. You wonder how to help, and you also wonder how to encourage the underachiever to help herself or himself.

Following are some help initiatives which may be considered for a range of underachievers.

- Identify areas where intrinsic motivations may be weak in your child.
- Determine the amount of effort necessary to perform at a desired level.
- Discuss self expectations with your learner.
- Prevent blind-sighted underachievement by working with the learner to recognize the signs of things gone wrong. Poor grades would be an immediate signal, but changed performance will occur before grades.
- Provide a sense of direction.
- Show the learner how to chart his/her persistence in obtaining a goal.
- Sit down together and outline goals for each course your child is taking. Discuss the course requirements and discuss the best ways to meet these goals. Keep communications open and helpful.
- Set up a timetable for completion of learning tasks, on the way to a major goal. See goals as made up of small, manageable parts or of small learning tasks.
- Offer comments of encouragement. Compliment positive actions. Speak uplifting words as you urge continued progress.
- Read along with your child several days a week. Ask for an oral discussion afterward.
- Invest in tutorial services. Often, bright, lazy kids fall behind deadlines. They have failed to take notes and failed to prepare in any form. They are lost in the course and see failure as the only option. A good tutor can sometimes mend holes and dash problems, if children cooperate wholeheartedly.
- Improve a deficient knowledge storage tank. Improve the pathway of general information your child needs to function properly in his academic environment. For example: Give her a subscription to an age appropriate magazine, encouraging her to read widely and frequently.
- Negotiate a contract with your child in which he provides a daily report to you, showing learning goals met.
- Brainstorm on ways to clear up particular problems facing the learner.
- Pull the plug on ineffective, inefficient, handicapping practices.
- Study your child. Early learning habits might require rerouting, if they show evidence of being nonproductive or hindering. For example, if you have an eight year old who writes by holding his pencil in an awkward, laborious manner, and you reposition the pencil showing how to handle it with greater ease, and he insists, "No. My way is better," you need to pull the plug on this behavior.
- If a child is young, you can simply say, "Try this new way for three weeks. See how it goes." Take a stand on seeing the new practice turn into a habit.

- Diversify interests. Often diverging lines converge to a common point. A child exposed to a wide interest base is more likely to draw these together for his academic benefit than the child who only experiences one type of culture.
- When you discipline, include a sense of nurturance.
- Consider the individual. Align a child's self expectations with outer expectations through means of lowest stress.

Underachievers clash with the norms of society as they plummet toward failure, whether they bear the tell-tale signs shown by Matt, Raena, Sara, Bliss, or Kenny. Their weak methods of performance disappoint parents, teachers, and themselves. If we want to help them, it is not enough to simply tag all underachievers through a wash of low grades, low performance, and high IQ. Individuals must be studied, having particular behaviors identified within unique situations. From the vantage point of parents, help can be offered through nurturing, caring actions which may minimize the failure of a learner close to you.

Vivian Owens wrote the new book, CHEMISTRY QUICKIES ($15.95), available from ESCHAR PUBLICATIONS, P.O. Box 1196, Waynesboro, VA 22980. She is also the author of parent-helper books and young adult novels.

★★★★★★★★ ★★★★★★★★ ★★★★★★★★

USING POETRY TO ENRICH THE SENSIBILITY OF GIFTED CHILDREN

BY MICHAEL E. WALTERS CENTER FOR THE STUDY OF THE HUMANITIES IN THE SCHOOLS

I am presently working as a mentor for new teachers in the New York City Public Schools. As part of my work, I recently assisted a teacher in conducting an enrichment class for gifted children at the third and fourth grade levels. (The school is located in the South Bronx and has been placed on probation by the New York State Department of Education.) I worked with them on poetry exercises. A few weeks ago they viewed the PBS performance of the Broadway musical, ***Cats***. They were so excited by the show that I chose the book of poems by T.S. Eliot (1888-1965) that the musical was based on – **Old Possum's Book of Practical Cats**, 1939.

The monthly theme of this school's reading program concerns holidays. In order to help students understand the origins of Veterans Day, I also read them lines from "Concord Hymn" by Ralph Waldo Emerson (1803-1882). For the lessons on the seasons of the year, I used his nature poems. Their response to these works by Eliot and Emerson are indicative of certain traits of giftedness.

They were impressed that an adult (T.S. Eliot) could relate to the life and environment of cats, and that his cats were from the city. The London of T.S. Eliot's time had aspects of its daily life that resembled inner city America. In the neighborhood where this school is located, there is a major problem with rodents -- almost every household has a cat as a necessity. These children do not view cats as sweet little pets, but as tough working animals that serve an important social role. At the same time, they react to cats in a mythic childlike manner as represented by cartoon characters such as Felix the cat, Tom and Jerry, and Sylvester the cat. It is these qualities of toughness, street-wiseness and comical behavior that Eliot captured in his cats – qualities which these students can easily comprehend.

The students eagerly wrote about their experiences with cats, and created booklets, drawings and poems about them. Many words in Eliot's poems were used in the vocabulary lesson such as "quorum" and "profound." Because the subject matter was so engaging, they independently searched their dictionaries for the meanings of these and other words from Eliot's cat poems. Afterwards, they wrote paragraphs using the new vocabulary words. It is clear that the students were stimulated cognitively and esthetically by these poems.

Many of the students in this school are from areas of the world that do not have autumn, e.g., the Carribean region and Africa. Also, they do not see large numbers of trees in their inner city environment. However, there are numerous parks in New York City, and teachers take their students to these areas. The students discovered in the nature poems of Emerson a sense of wonderment, awe and reverence for nature. The following lines from "Woodnotes: I" demonstrate this sense of enjoyment from observing nature: "Lover of all things alive, /Wonderer at all he meets,/Wonderer chiefly at himself, /Who can tell him what he is?. . . ."

In "Concord Hymn" (July 4, 1837) by Emerson, they thought about the role of individuals performing tasks for the benefit of future generations. The following lines from this poem show why it is important to remember the past: "On this green bank, by this soft stream,/We set today a votive stone;/That memory may their deed redeem,/When, like our sires our sons are gone. . . ."

Emerson's poems stimulated further interest in American history. For example, many of the streets surrounding the school are named after individuals who were involved in the Revolutionary and Civil wars. As the result of reading these poems, students went to their public library to study the origins of their neighborhood street names such as Grant, Sherman and Sheridan. As my recent experiences at this school demonstrate, poetry and great poets are a major way to enrich the sensibility of giftedness.

From page 1 –
published in ***GEPQ*** during the last thirteen years, it is clear that the arguments for identifying and educating gifted children are strong, convincing and valid.

What then needs to be done that is crucial to the future success of this educational field? One of the biggest problems is that we have been mainly "preaching to the choir" rather than presenting our case for gifted education to average Americans who pay most of the taxes for operating the public schools. This is a major challenge that must be addressed if gifted students and their education programs are to survive and thrive.

The current issue contains a discussion of the problem of why so few gifted females choose careers in mathematics, science and technology fields. Lynn H. Fox is a professor in the School of Education at American University. Her research interest in mathematically gifted girls dates back to the early 1970s when she helped Julian Stanley create ***the Study of Mathematically Precocious Youth*** at The Johns Hopkins University. Janet F. Soller is a doctoral candidate at American University. Formerly a college administrator and musician, she is currently studying the impact of college on first generation female college graduates.

The article by Vivian Owens examines the problem of underachievement in gifted students. She has taught many gifted adolescents, and is a veteran high school chemistry teacher. She also writes parent-helper books and African American children's literature for ages 7 and up. Her newest works are **Chemistry Quickies** (1998) and twin motivational novels, **I Met A Great Lady** (1998) and **I Met A Great Man** (1998). **Nadanda, The Wordmaker** (1994), her first novel, won a Writer's Digest Award. In addition to teaching and writing, Owens develops Parenting for Education workshops.

Michael Walters continues his studies of the humanities with a discussion of how the poetry of T.S. Eliot and Ralph Waldo Emerson can be used to teach gifted children.

Maurice D. Fisher, Publisher

Book Review -- Condensed from *Gifted Education News-Page* - Vol. 8, No. 1 – Oct.-Nov. 1998

CONSILIENCE: THE UNITY OF KNOWLEDGE BY EDWARD O. WILSON. (1998). NEW YORK: ALFRED A. KNOPF.

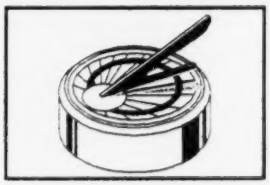
Edward O. Wilson, a world renowned evolutionary biologist, has written a book that has significant bearing on the education of gifted students. The primary focus of his narrative is on the problem of identifying procedures and principles for unifying all major fields of human knowledge – physical sciences, biological sciences, social sciences, the humanities, and the arts.

He defines consilience as ". . . .a 'jumping together' of knowledge by the linking of facts and fact-based theory across disciplines to create a common groundwork of explanation." (Chapter 2, p. 8). Although the immediate importance of this concept for educating the gifted is not apparent in the early chapters of this book, the later chapters show how Wilson's search for relevant information bearing on the unity of knowledge in different fields can positively affect the learning and perceptions of intellectually advanced students. Individuals concerned with developing a curriculum for these students such as Harry Passow and Virgil Ward stressed (beginning in the 1960's and 1970's) the importance of designing a unified curriculum that concentrates on the interrelation between different subject areas through identifying common concepts and principles. It appears that this commendable goal has been long forgotten (or possibly never learned) by many individuals currently involved in designing differentiated curricula.

E.O. Wilson's book will help to alleviate this memory loss by providing the historical, philosophical and scientific reasons for concentrating on the unity of all subjects through consilience. First, he explains how this idea was rooted in the French Enlightenment (17th-18th centuries) through such philosophers and encyclopedists as Condorcet (1743-94), who believed that general laws could be developed which predict the historical progress of human knowledge and culture. The Enlightenment was sparked by two great thinkers, Sir Francis Bacon (1561-1626) in England who designed an empirical method (the "scientific method") for investigating natural phenomena, and René Descartes (1596-1650) in France who introduced the powerful mathematical-reductionist method for studying the physical world. Bacon and Descartes wanted to develop a system of knowledge that linked different fields through empirically based knowledge and mathematical proofs. Their influence on the scientists of the Enlightenment such as Sir Issac Newton was in two areas – the discovery of general laws to explain apparently disparate physical phenomena (e.g., Newton's laws of physics), and a pervasive optimism that science can solve all of humanity's problems and lead to constant progress. Wilson, of course, follows in this Enlightenment tradition; he is opposed to the anti-science viewpoints of postmodern pessimists and deconstructionists. He has written a thoughtful book on the problem of synthesizing enormous amounts of knowledge from different fields of study. He is optimistic that this task can be accomplished for the benefit of all nations and cultures. Gifted students can play a major role in achieving consilience through their advanced analytic skills and ability to see beyond the trees i nto a more enlightened future.

GIFTED EDUCATION PRESS QUARTERLY

10201 YUMA COURT
P.O. BOX 1586
MANASSAS, VA 20108
703-369-5017



SPRING 1999
VOLUME THIRTEEN, NUMBER TWO

LIFETIME SUBSCRIPTION: $22.00

www.cais.com/gep

MEMBERS OF NATIONAL ADVISORY PANEL

Dr. James Delisle – Professor and Co-Director of *SENG*, Kent State University, Kent, Ohio

Dr. Jerry Flack - Professor, University of Colorado, Colorado Springs

Dr. Howard Gardner – Professor, Graduate School of Education, Harvard University, Cambridge, Massachusetts

Ms. Diane D. Grybek - Supervisor of Secondary Gifted Programs (Retired), Hillsborough County Schools, Tampa, Florida

Ms. Dorothy Knopper - Publisher, Open Space Communications, Boulder, Colorado

Mr. James LoGiudice - Director, Program and Staff Development, Bucks County, Pennsylvania IU No. 22 and Past President of the Pennsylvania Association for Gifted Education

Dr. Mary Meeker -- President of SOI Systems, Vida, Oregon

Dr. Adrienne O'Neill -- Johnson & Wales University, Providence, Rhode Island

Dr. Stephen Schroeder-Davis – Coordinator of Gifted Programs, Elk River, Minnesota Schools and, Past President of the Minnesota Council for the Gifted and Talented

Dr. Bruce Shore – Professor and Director, Giftedness Centre, McGill University, Montreal

Ms. Joan Smutny - Professor and Director, Center for Gifted, National-Louis University, Evanston, Illinois

Dr. Virgil S. Ward -- Emeritus Professor of Gifted Education, University of Virginia, Charlottesville, Virginia

Ms. Susan Winebrenner - Consultant, Brooklyn, Michigan

Dr. Ellen Winner -- Professor of Psychology, Boston College

As we approach the end of the century and millennium, it might be of value to reexamine our society's perceptions of giftedness in order to develop some new ideas for improving this area of education. Americans today have great respect for and interest in high levels of performance bordering on the fanatic. Unfortunately, this attitude is primarily directed toward the sports mania prevalent throughout all ages and social classes. The high athletic accomplishments of Michael Jordan, Mark McGwire and Sammy Sosa cannot be denied. They demonstrate a program of success that educators in the gifted field should thoroughly study to learn about identifying potentially high performers at young ages, how to best educate them, and how to generate more support (both moral and monetary) from the American public. Why does the typical football weekend at most universities and professional football stadiums produce hundreds of thousands of fans in addition to millions of television viewers around the world? What attractions do sports such as football, basketball and baseball hold for the typical fan? The systematic study of these and other related questions (such as team selection and training methods) might shed light on how educators can generate more interest in developing high performing children in the academic, music, artistic and personal areas of development. Obviously, millions of fans have great respect for highly gifted athletes, but they usually ignore the outstanding achievements of children who are exceptional in such areas as writing and mathematics. **Sports in America** (1976, Fawcett Crest) by James Michener provides important insights into this problem. His discussion of the similarities between great athletes and highly gifted individuals is particularly relevant: ". . .I believe that the human intellect also prospers from competition. It seeks challenges. It has got to test itself against tasks of magnitude. It wants to weigh itself against the great norm of its time. On the lowest level it is the small-town pool shark who dreams of the day when he can challenge Minnesota Fats. On the highest level it is the burgeoning scholar who wants to test himself against Spengler and Einstein. Flamboyantly, it is Ernest Hemingway boasting that he went into the ring against Flaubert and Pio Baroja and fought them to a draw. Less flamboyantly, it might be the businessman who says to himself, 'I think I've put together something that may stand for a while,' or Hank Aaron saying quietly, 'If I make it through till next April, I know I can break Babe Ruth's record.'" (p. 526).

The University of Maryland, Baltimore Campus has recently developed a world champion chess program that shows how Michener's statement can be put into action ("Kings of the Campus – At Maryland School, Chess Team Gets Glory Usually Reserved for Football," The Washington Post, February 5, 1999). Here, cheerleaders, the school mascot, the marching band and the entire student body turned out to cheer their chess team's

Continued on page 12

HOPE AND HELP FOR THE GIFTED WHO ARE LEARNING-DISABLED

BY LYNN H. FOX SCHOOL OF EDUCATION AMERICAN UNIVERSITY

What do actor Henry Winkler, musician-activist Harry Belafonte, writer Fanny Flagg, and professor of medicine Dr. Donald Coffey have in common? As children, all four struggled to overcome a learning disability. The four are also gifted and talented. Although the phenomenon of learning disabilities became generally known in the educational community around 1960, the fact that people could be both learning-disabled and gifted was not immediately recognized (Fox, Brody & Tobin, 1983). Although there are numerous approaches to the identification of giftedness (Fox, 1981) and variability in the assessment and classification of learning-disabilities (Berk, 1983), the idea that these categories of students are not mutually exclusive has been repeatedly demonstrated in more recent years (Tannenbaum & Baldwin, 1983; Rosner & Seymour, 1983; and Senf, 1983). Indeed, children who are both learning-disabled and gifted may go unnoticed if their giftedness masks their disability and/or the disability masks their giftedness.

Students who are both gifted and learning-disabled fall into one of three broad categories. The first group are those who appear to be bright. They are full of information that they can recount and explain orally very well. If referred by teachers for testing for gifted programs, however, they are not likely to be identified as gifted because their performance on paper and pencil tests (which are used in most preliminary evaluations) often places them in the average to above-average range, but not the gifted range. A variation in this scenario is that the students are placed in a program for the gifted but are not able to keep up with the fast pace of an accelerated class or to keep up with written assignments and readings required in an enrichment program, so that eventually they are dropped from the program. The second group of gifted and learning-disabled students are those who are perceived as average. In reality, they may be very talented in one or more areas but children in this group also have some learning disabilities that are not quite severe enough to be noticed (Fox, 1983). In a sense, their disabilities and giftedness cancel each other out and they receive no special services. The last group of students who fall into both categories are those children who have very severe disabilities and whose giftedness may be totally ignored or unrecognized.

Unfortunately for all three categories of special students, the outcome is that their talents are not nurtured and their self-esteem is likely to be very low. Even when the learning disability is so severe that they are referred for special services, most programs for the learning-disabled focus on overcoming or compensating for the disability and fail to nurture talents and gifts. One remarkable exception is the Lab School of Washington, D.C. (LSW), a not-for-profit school affiliated with The American University in Washington, D.C.

The LSW, founded by Professor Sally Smith in 1967, has a history of helping the severely learning-disabled student develop his/her talents. In a recent study of four LSW graduating classes (1989, 1990, 1991, and 1992) there were no dropouts and the rate for entering college was 73 percent (Fox, Smith, & Knight, 1995). From 1993-1998, 90 percent of graduates went on to college or community college. This is dramatically different from the norm for learning-disabled students in high schools. National statistics estimate that roughly half of the learning-disabled population become high school dropouts and only a third of those who graduate attempt post-secondary education (Levin, Zigmond, & Burch, 1985; Peraino, 1992; and Zigmond, & Thornton, 1985). Even more remarkable is that the LSW serves a population of students that are considered to be the "toughest cases" by the school systems that refer them to LSW. Approximately 85 percent of the student body each year is referred by their local public school system in the greater Washington, D.C. area because their schools cannot provide an appropriate educational program for them. In addition, most students at LSW are diagnosed as having an attention deficit in addition to their other specific learning disability. The student body is fairly representative of the racial and economic diversity of the area (about 28-30 percent are African-American) but there are large differences in referral rates by gender and there are usually four boys for every girl enrolled. Although these children have been judged as the "worst cases" in their home schools, at LSW they grow into more competent students and even high achievers.

An alumnus who was recently honored at an annual LSW Gala is a Phi Beta Kappa graduate of Oberlin College and a graduate of the Duke University School of Law. He was referred to the Lab School as a child who was behind his peers in every aspect of schooling, and he is not unique. Graduates of LSW include several that have flourished in fields such as architecture, film production, photography as well as law. Indeed, students graduating between 1989 and 1992 were enrolled in colleges ranging from small liberal arts schools such as Guilford College and Southern Vermont College to large universities such as The American University, Florida A&M, the University of the District of Columbia, Syracuse University and the University of Arizona (Fox, Smith, & Knight, 1995).

LSW has been recognized as a model of "best practices" by the National Diffusion Network and received the Blue Ribbon Award for Elementary and Junior High Schools in 1997 and the Blue Ribbon Award for High Schools in 1995. (Note that the school was only one of two special education schools in the country to win the Blue Ribbon Award from the U.S. Department of Education.) A model for special education, the LSW offers insights into what other schools could do to foster the gifts and talents of at-risk students while still providing each

child with the appropriate help and instruction to meet individual needs. The formula for success at LSW involves the interaction of several factors and program components that challenge students' intellects as much as possible. In brief they are:

1. Concrete and thematic teaching,
2. Use of microcomputers,
3. Emphasis on the arts and arts-based teaching,
4. Recognition of multiple intelligences and diverse learning styles,
5. A focus on self-esteem, and
6. Psychological support services.

With all six components present, the learning environment of LSW works to meet both the cognitive and affective needs of each student. The LSW nurtures the students' talents and strengths, and helps them compensate for their specific learning problems. Indeed, the LSW represents a model of teaching for diversity that could be applied to many different populations besides the learning-disabled, particularly gifted students.

Concrete and Thematic Teaching

Influenced by the research and writings of educators and researchers such as John Dewey, Jean Piaget, Jerome Bruner, and Howard Gardner, Professor Sally Smith, creator and director of the Lab School, developed a curriculum model that emphasizes active and experiential learning, the arts, and integrated content domains. One of the most exciting parts of the day for students is the one hour allotted for their special academic club. The themes of these clubs are different for each grade and they integrate classical literature, history, geography, science, and mathematics, as children become immersed in a reconstruction of the life and times of another era or the magical world of mythology and fantasy.

For example, in a recent summer school academic club, the theme of rainforests was used. Art and science naturally merged as students created colorful pictures and models of inhabitants of the forest to decorate walls, hang from the ceiling and perch in a large artificial tree that sat like an umbrella over the work tables in the classroom. Discussions of endangered species led to collecting information about the species and their environmental needs. Another possible extension of this theme might be a discussion of social studies topics as students try to understand the politics involved in saving the forests from over-development. The folklore and stories of the peoples of the rainforest could also serve as a natural bridge to having students create, write, and dramatize their own adventure tales.

Another example of concrete teaching techniques was a class in which the teacher realized that his students had no grasp of the relationships among geographical and political entities such as continents, countries, states, and cities. This teacher brought in boxes of various sizes and students labeled the smallest ones with city names, and the next larger size set of boxes with the names of states. A very large box was designated as the United States of America and the very largest box became North America. By nesting the boxes, students came to understand the idea of inclusion as it related to cities, states and countries. In another class, students who were studying the history of Native American tribes, were intentionally displaced to smaller and less comfortable classrooms in the school several times in a two-week period until the students became so annoyed with their treatment and the conditions in which they had to have class that they wrote a letter of protest to the Director of the School. Through this activity, the teacher was then able to help the students appreciate the parallels in their own repeated displacement and loss of resources to the experiences of the tribes they had been studying (Smith, 1991).

Other examples of the use of concrete and relevant teaching techniques include a unit in archeology. This project evolved as students became part of a real dig when an Indian Mound was discovered on school property. Another meaningful learning experience is a writing assignment that requires students to interview local artists. In past years, this assignment has led to the production of a pamphlet complete with LSW students' photographs of the artists, their write-ups of each artist and gallery, and quotations from the artist. The students were responsible for the printing of the pamphlet, advertising, and sales. The pamphlet is now sold at some galleries and museums such as the National Gallery of Art and the Phillips Museum. Regardless of the specific teaching tools or medium, the curriculum emphasizes engaging the learner in meaningful activity with concrete examples and opportunities to engage in authentic hands-on projects. For example, mathematics instruction relies on manipulatives and elaborate visuals to help teach operations and number facts and concepts. In one class, students were having difficulties grasping the concept of measurement of volume. The teacher in this classroom brought in balls of different sizes that the students cut open and could fill with paper wads to "see" the differences in volume.

The educational literature is replete with research and theory extolling the value of hands-on learning under many names such as cognitive constructivism, authentic assessment, whole language, and so forth. The implementation of theory into practice is too often missing from the classroom strategies teachers routinely employ. Programs for the gifted, especially those who have specific learning problems must move to the forefront in demonstrating that such teaching methods can become central to the instructional process on a day-by-day, hour-by-hour, moment-by-moment basis.

Use of Microcomputers

Thematic and concrete teaching is enhanced by the use of technology. Word processing skills are essential for learning-

BEST COPY AVAILABLE

disabled students, especially those heading for college. Often these students have both spelling and handwriting problems. When they learn to type papers and use spell checkers, the looks of their written products are vastly improved and they can communicate their ideas more clearly. Of course some mistakes will not be caught such as typing "to" for "two," but it is easier for the students to proofread their work when it is typed than when it is in their own handwriting which is often messy, disorganized, and error-ridden. Indeed, the graphics and "patience" of even the more mundane computer programs often motivate the learning-disabled student who might otherwise grow restless when trying to master simple tasks. At a more advanced level, students work with authoring software to create multimedia presentations that can be used to teach their peers as well.

The use of technology such as word processing and multi-media software for presentations helps the gifted child to produce work that is more compatible with their potential than they could otherwise produce because of poor handwriting and spelling. This helps to reduce some of the extreme stress felt by those who are gifted and learning disabled, and who are frustrated by their inability to communicate as effectively as they would like, or who are frustrated by their inability to produce written work that reflects their level of conceptualization. Microcomputers are not toys or frills but critical tools to help compensate and circumvent the communication barriers typically encountered by the learning disabled. Microcomputers allow gifted students to really express themselves in creative and sophisticated ways.

Emphasis on the Arts

A twelve-foot tall dragon constructed by the students over a period of several months sits outside the main entrance of LSW. Art work of every type and size adorns the walls, hallways, and classrooms. A huge mosaic made of carpet tiles covers one entire wall of a large all purpose room, and the library's shelves are lined with books written, illustrated, and bound by the students themselves. Not only do students take great pride in producing this artwork but these works serve as valuable teaching tools as well. In the lower grades, for example, the students cannot take a wood-working project home until they have explained to the class or another student each step of the process they used to create the object. This is, of course, a great challenge to those children for whom memory and sequencing skills are a major part of their disabling condition. Indeed, projects are often chosen specifically to help the students master the skills of organization, planning and monitoring their own progress.

The graphic arts are not the only focus at LSW. Music and dance are also essential parts of the program and are integrated with physical education so that dance and gymnastics are choreographed to music and performed for peers and parents. It is believed that there are clear links between developing gross and fine motor coordination and thinking skills. Smith's theory is that concentrating on organizing the body helps students to organize their minds. Interestingly, some of the teachers have seen an actual motoric breakthrough occur just before a corresponding conceptual breakthrough. For example, children who finally master walking backwards may soon afterwards grasp the mathematical concept of reversibility that had eluded them in their mathematics class.

Unfortunately many school systems see the arts as a "frill" or "extra," not a crucial part of the mainstream curriculum. When funds are short the "specialist teachers" are often the first to be cut. The LSW program is a testimonial to the importance of the arts in the curriculum for the learning-disabled and gifted child as well as showing the logic for integrating the arts more centrally into all instructional processes and related to all curriculum content. Science, mathematics, history, geography, and language arts all involve multi-media expressions of information, feelings, and ideas.

Recognition of Multiple Intelligences and Diverse Learning Styles

Howard Gardner's Multiple Intelligences Model (Gardner, 1983) also contributes to the philosophy and teaching techniques used at the LSW. If a child is gifted in areas other than the more traditional academic ones, the outlet for these gifts may be limited in a typical school setting. At LSW, however, musical, kinesthetic, and visual activities are integrated into all the academic clubs along with the traditional logical and verbal curriculum content. For example, learning about the Gold Rush may require the construction of elaborate paper maché models of mines and mountain ranges as well as the construction of prairie schooners of varying sizes. Understanding the concept of the greatest common factor can be done by comparing sets of jumping children, those who jump on multiples of two and those on multiples of three, etc. to see what happens when we count to 12. Performing for students at other schools as part of a musical outreach to the community has also fostered the "can do" attitude so necessary for the success of these children.

The academic clubs model incorporates Gardner's multiple intelligences with thematic teaching and a whole language approach in ways that make learning meaningful and exciting for teachers and students alike. Professor Smith is currently writing a manual for teachers on how to replicate the clubs. Funding is being sought to bring teachers to the LSW for a full year of training in teaching with the LSW model. Clearly this approach could be used for self-contained gifted classes or for pull out enrichment activities.

A Focus on Self-esteem

Common adjectives used by learning-disabled people, and their teachers and families to describe a learning-disabled person are

stubborn, *recalcitrant*, *intractable*, *unmovable*, and *impossible*. One of the major goals of LSW is to help students see how these characteristics can be recast in more positive terms. That is, *stubborn* can mean *tenacious*; *recalcitrant* may be *single-minded*. The words *indomitable*, *fiercely determined*, and *driven* can replace the terms *intractable*, *unmovable*, and *impossible*, respectively. One way this is done is by the use of role models. Each year the school holds an awards ceremony to honor one or more successful adults who were learning-disabled children. As part of the events, these adults visit the school and talk with the students. Seeing adults that they recognize from movies, sports and television admit that they could not spell, read, or organize themselves as children, but have worked to overcome these problems, gives a real breath of hope to students at LSW. They are still struggling to overcome the feelings of failure and inadequacy often brought on from spending years in schools that only recognized the child's deficit, and never saw the wonderful potential and creative thinking that was there, too (Smith, 1991).

Some of the growth in self-esteem seems related to mastery of sophisticated information through the Academic Clubs. Being able to intelligently discuss the Industrial Revolution and role play the life stories of famous characters of that time period gives students a feeling of efficacy, even if they must struggle to learn the information from alternatives to textbook reading. LSW teaches students that they can master information and learn the skills to acquire information using a variety of strategies.

The many concrete products that students produce in the course of their studies such as their self-authored books in the school library also contribute to feelings of increased self-worth. The teachers' uses of concrete and visual aides to problem-solving and critical thinking become models for the students in their own efforts at problem-solving. This acquisition of general heuristics that they can transfer to new situations and problems gives them the courage to tackle college. They learn to translate *stubbornness* into *tenacity* as they try to tackle new skills and information. Teachers are trained to understand the students and their need for success and to use specific praise to reward meaningful effort. Teachers also learn how to use reflective "recasting of affect" to help students put things into perspective. When a student over-generalizes from failure on one task to a sense of hopeless total failure, teachers know how to diffuse this and focus the students (Smith, 1991). When Arnie says he is doing terribly at school when he has just been unsuccessful at an immediate task, the teacher is quick to say something like, "I know you are disappointed that you haven't learned all these new vocabulary words yet, but remember how well you are doing this week in your math class, and what a good job you did on your book report yesterday."

Self-esteem is important for all children. Just because children are intelligent doesn't mean they feel good about themselves. For gifted children who are learning disabled, self-esteem is critical. They are prone to depression resulting from their frustrations in producing the work on paper that they can envision in their mind's eye. Thus, for these children attention to self-esteem in the classroom may need to be supplemented by additional psychological services.

Psychological Support Services

Turning failing students into high achievers is a difficult task and the path is never direct. For every success a student may experience, there are likely to be ten times more failures or frustrated attempts. They are often discouraged, sometimes depressed, and sometimes so depressed that they contemplate suicide or running away from home. The staff of LSW includes full-time psychologists who are able to intervene immediately and meet one-on-one with the student on a regular basis when necessary. These psychologists work closely with students' families and teachers to help them recognize signs of stress and impending crises.

Indeed, support services for parents are an essential part of the LSW approach. Often the parents are frustrated from years of seeing their child try so hard yet only meet failure and rejection. Sometimes they are bitter, or resentful because the child is an embarrassment or requires so much time and attention, or is so depressed or manic that the parent does not know how to cope. LSW realizes that the parents need help in developing parenting skills to cope with the special needs of their child. They also realize when they empower parents, they can in turn be an asset to the program by reinforcing the desired behaviors at home and fostering positive self-images. LSW conducts regular monthly programs for parents over a wide range of topics, and counseling is provided for the parents and child as needed, especially in the early months at the school.

Although this last component may not be essential for programs for gifted students who are not learning disabled, it is likely that parents of all children need more support than is typically available. Some areas have associations of parents of the gifted that can be invaluable in sharing ideas for solving the problems that can arise when a bright child meets a barrier or encounters failure, an unsympathetic teacher, hostility from peers, or other problems. For the parents of children who are learning disabled and gifted, the need for support groups and advice is great.

Applying the LSW Model to Gifted Education

The Lab School of Washington is a school designed for a very special population, those students who are not able to survive in the normal school program, even one that has resources and special services for the learning disabled. Yet of the six key components of the program, only one is not readily exportable to regular schools serving all types of students. That is the extra staff for psychological services and crisis intervention. The

other five components of concrete and thematic instruction, use of microcomputers, infusion of the arts, teaching for diverse talents and learning styles, and attention to self-esteem can be incorporated into any school setting. While it is true that LSW has small class sizes, this is necessary because of the large number of students who have severe attention deficits and learning disabilities. With a more general population or a group of gifted children, a teacher could handle a regular size class and still implement thematic and concrete teaching, more focus on the arts, and a climate that promotes self-esteem and parental involvement.

The LSW was designated a model of promising practices in April 1994 by the National Diffusion Network. It is the goal of the school to explore ways to expand the impact of LSW nationally. It seems likely that the Academic Clubs, experiential learning and arts infusion into the curriculum could be used with even greater success with other populations such as the gifted. If one school can help so many severely learning-disabled children beat the odds for failure, just imagine what a whole nation of similarly successful programs might accomplish with gifted ones.

Although known as a school for the learning-disabled, the LSW could be a viable model for a school for the gifted or for an inclusion approach in a regular school. The elements that are especially important for the gifted are as follows:

> A curriculum rich in information as well as in modes to access and express the information as in the model of academic clubs where art and role-playing are part and parcel of learning history, science and literature.
>
> The use of technology to enhance individualized learning goals and activities, and to allow for collaboration among students on meaningful projects like the creation of multi-media storybooks.
>
> The emphasis on multiple intelligences and the need for multiple approaches to teaching and learning, the integration of curriculum, and inclusion of art, dance, drama and music into the daily study of reading, writing, and arithmetic.
>
> The focus on self-esteem and the development of empathy.

Exporting the LSW Model

One of the unique features of LSW is that it serves as a teacher-training facility as well. Students in the Masters Program in Special Education at American University become part of the teaching team long before they officially enroll in student teaching. Students enrolled in regular teacher certification programs have an opportunity to learn about the school and work there as well, especially during the summer school programs conducted at the Lab School. The school is now undertaking the creation of partnerships, and in-service training workshops for schools interested in applying the LSW techniques and philosophy.

The LSW model of teaching offers insights into how to foster talents and gifts for all learners everywhere. Thematic teaching, the infusion of the arts into basic curriculum, focusing on self-esteem, and communication and support for parents are all important components of the LSW model that can be applied to gifted education. Most importantly, the LSW shows that it is possible to offer hope and help to those who are both gifted and learning-disabled.

REFERENCES

Berk, R. A. (1983). Learning disabilities as a category of underachievement. In L. H. Fox, L. Brody, and D. Tobin (Eds.), Learning-disabled/gifted children: Identification and programming (pp. 51-76). Baltimore, MD: University Park Press.

Fox, L. H. (1981). Identification of the academically gifted. The American Psychologist, 36 (10), 1103-11.

Fox, L. H. (1983). Gifted children with reading problems: An empirical study. In L. H. Fox, L. Brody, & D. Tobin (Eds.), Learning-disabled/gifted children: Identification and programming (pp. 117-140). Baltimore, MD: University Park Press.

Fox, L. H., Brody, L., & Tobin, D. (Eds.). (1983). Learning-disabled/gifted children: Identification and programming. Baltimore, MD: University Park Press.

Fox, L. H., Smith, S., & Knight, L. (1995). Beating the odds: Helping learning-disabled students succeed. The Journal of Emotional and Behavioral Problems, 3 (4), 26-30.

Gardner, H. (1983). Frames of mind. New York: Basic Books.

Levin, E., Zigmond, N., & Birch, T. (1985). A follow-up study of 52 learning disabled adolescents. Journal of Learning Disabilities, 18 (1), 2-7.

Peraino, J. M. (1992). Post-21 follow-up studies: How do special education graduates fare? In P. Wehman (Ed.), Life beyond the classroom: Transition strategies for young people with disabilities (pp. 21-70). Baltimore, MD: Paul H. Brookes Publishing.

Rosner, S. L., & Seymour, J. (1983). The gifted child with a learning disability: Clinical evidence. In L. H. Fox, L. Brody, & D. Tobin (Eds.), Learning-disabled/gifted children: Identification and programming (pp. 77-100). Baltimore, MD: University Park Press.

Senf, G. M. (1983). The nature and identification of learning disabilities and their relationship to the gifted child. In L. H. Fox, L. Brody, & D. Tobin (Eds.). Learning-disabled/gifted children: Identification and programming (pp. 37-50). Baltimore, MD: University Park Press.

Smith, S. (1991). Succeeding against the odds: How the learning disabled can realize their promise. New York: Putnam Publishing Group.

Tannenbaum, A. J. & Baldwin, L. J. (1983). Giftedness and learning disability: A paradoxical combination. In L. H. Fox, L. Brody, & D. Tobin (Eds.). Learning- disabled/gifted children: Identification and programming (pp. 11-36). Baltimore, MD: University Park Press.

Zigmond, N. & Thornton, H. (1985). Learning disabled graduates and dropouts. Learning Disabled Quarterly, 1 (1), 50-55.

FURTHER USES OF QUOTATIONS TO CHALLENGE GIFTED STUDENTS

BY ROSS BUTCHART VANCOUVER, BRITISH COLUMBIA

INTRODUCTION

In a previous issue of this quarterly I wrote an article ("Using Quotations to Challenge Gifted Students", Vol. 9, No. 3, Summer 1995) where I began by explaining how I came to write *Quotations for Creative Insights and Inspiration: A Quotations Based Humanities Curriculum for Gifted Students and Their Teachers in Middle and High School* (Gifted Education Press, 1995).

I then went on to discuss five values I saw in a quotations-based curriculum; and finally, to suggest nine possible products of learning from a quotations-centered curriculum, along with examples of assignments that could foster their creation.

As a parallel to coincide with release of the expanded second edition of *Quotations for Creative Insights and Inspiration. . .*, my purpose now is to capitalize on lessons learned from events and experiences over the intervening years and add to those thoughts I expressed in that earlier article.

CLASSROOM CLASSIC

It greets my students every day as they arrive in class -- a new quotation on a section of the blackboard specially designated for the purpose. Often humorous, frequently serious, periodically ridiculous, sometimes controversial, it is an immediate measure of students' interest or indifference. On some days it generates little or no response. On others it galvanizes discussion or debate that can go on for as long as an hour and a half. But there are two barometers of greatest success: when students are still debating the significance of a quotation as they leave the room for their recess break or a change of subject, and when a student asks if he or she can offer a quotation for the 'quote board.' Recently I received the measure of ultimate success -- a student gave me eleven pages of Humorous Quotations taken from the Internet. And while some were beyond the bounds of good taste for classroom use, others were imaginative and creative -- and will be put to good use.

* * * * *

A timely quotation can give emphasis to expression of feeling or attitude about a significant event or a significant person. On the day prior to the Remembrance Day holiday (Canadian equivalent of Veterans Day) I placed George Santayana's famous quotation, "Those who cannot remember the past are condemned to repeat it." on the 'quote board.' Not only did it serve as a lead-in to a discussion about the historical significance of Armistice Day and how commemorating the sacrifice of the dead from World War I on November 11 has been expanded to include World War II, the Korean War, and UN Peacekeeping Missions; it gave pause for thought to consider what is required to avoid future repetition of past horrors. Then, as a follow-up on the day after the holiday, I presented F.W. Robertsons' quotation, "There is a past which is gone forever, but there is a future which is still our own." "Is there any connection between the two?" I challenged. "Does the second contradict the first?" "Is either, or are both an expression of hope or pessimism?" "With which quotation are you in greater agreement?"

Further examples of quotations that connect to significant personages and/or events could include the following:

"The ultimate measure of a man is not where he stands in moments of comfort and convenience, but where he stands at times of challenge and controversy."
- Martin Luther King

"The courage of life is often a less dramatic spectacle than the courage of a final moment; but it is no less a magnificent mixture of triumph and tragedy."
- John F. Kennedy

"Seriously, I do not think I am fit for the presidency."
- Abraham Lincoln

* * * * *

A quotation can give perspective to students' personal experiences. On the day after I returned a test on which the class as a whole scored particularly poorly, the 'quote board' contained the following two quotations:

"Failure should be our teacher, not our undertaker."
- William Arthur Ward
"Do not look where you fell, but where you slipped."
- African Proverb

About the test itself -- nothing was said; no questions were asked.

* * * * *

A good quotation can serve to 'lighten up' a serious or sombre classroom atmosphere. Certainly this was the case the day the words of Clarence Day were the quote of the day: "If your parents didn't have any children, there is a good chance that you won't have any."

QUOTATIONS AND THE NEWSPAPER

Quotations, as the following example illustrates, are an ideal avenue to consider opposing points of view relating to a newspaper article:

Recently a municipal councillor complained to the press that the mayor was treating her with disrespect. "He ignores my efforts to contribute dialogue during public meetings," she agonized, "and he told me to 'keep my mouth shut and be quiet' in an in-camera session."

My approach to a discussion about this article was to challenge the students with a single question:

Which of the following quotations most aptly applies to this story:

"If you can't stand the heat, get out of the kitchen."
- Harry S. Truman

"Rudeness is a little person's imitation of power."
- Anonymous

QUOTATIONS AND POETRY

A verse of poetry, when presented as a quotation along with a question(s) for directed study, invites research and analysis. Not only does such an approach reveal to students varieties of style and the great themes of literature, it frequently forces them to confront a dilemma or resolve moral predicaments. Consider the following:

"He breathed, 'I'd do it for you, Bob.'"
- "David" by Earle Birney (1904-1995)

1) What is Bob's dilemma and how does he resolve it?
2) Discuss this resolution.

"And that has made all the difference."
- "The Road Not Taken" by Robert Frost (1874-1963)
"We drew a circle that took him in!"
- "Outwitted" by Edwin Markham (1852-1940)

1) What is the significance of the final line of each poem to its theme?

"They also serve who only stand and wait."
- "On His Blindness" by John Milton (1608-1674)

1) How can standing and waiting, normally considered qualities of passive indifference, be considered attributes of service?

"I'd toddle safely home and die - in bed."
- "Base Details" by Siegfried Sassoon (1886-1967)
"And like a thunderbolt he falls."
- "The Eagle" by Alfred, Lord Tennyson (1809-1892)

1) What figure of speech does each author use in his poem?
2) How does each give emphasis to poetic expression?

"Then you are a man my son."
- "If" by Rudyard Kipling (1865-1936)

1) What are Kipling's criteria of manhood?

"And lo! Ben Adhem's name led all the rest."
- "About Ben Adhem" by Leigh Hunt (1784-1859)

"'Not love, quoth he, but vanity, sets love a task like that.'"
- "The Glove and the Lions" by Leigh Hunt

1) Which poem by Leigh Hunt do you consider the better? Why?

"Though each was partly in the right,
And all were in the wrong!"
- "The Blind Men and the Elephant" by John Godfrey Saxe

1) List two ways a person can be blind.
2) How do these two final lines of the poem relate to the theme of blindness?

"Thanks, thanks to thee, my worthy friend,
For the lesson thou hast taught!"
- "The Village Blacksmith" by Henry Wadsworth Longfellow (1807-1882)

1) What is 'the lesson'?
2) How is it relevant to students of today?

QUOTATIONS AND CREATIVITY

As a boy growing up in Vancouver during the 1950's, I was intrigued by the advertising campaign of an emerging GM dealership. Invariably their radio spot would end with the slogan, "Not best because we're biggest, but biggest because we're best!" Long after they became the biggest in both size and sales the organization retained the slogan -- a testament to its impact on the purchasing public, as over time it had become a verbal trademark of the company.

Impressed as I was, as an adult I began to collect and create examples of similar expressions where reversal of word order or interchanging parts of speech in parallel structure form a captivating expression. When I recently shared this passion with a new colleague she suggested, "Since I've never heard of a name for this type of expression, why don't you give it one?" Why not, indeed? So I coined the portmanteau word *Aphersal* -- a blend of 'aphorism' and 'reversal' to fill the absence of any other know term. Some examples of aphersals from my repertoire include:

"People don't care how much you know,
they want to know how much you care."
- Bank commercial

"Better one be dying to live than be living to die."
- Author

"A life of waste is a waste of life."
- Author

"To do what you like is freedom, to like what you do is happiness."
- Anonymous

"It's good to be great; it's greater to be good."
- Anonymous

"Let us never negotiate out of fear. But let us never fear to negotiate."
- John F. Kennedy

"When the going gets tough, the tough get going."
- Anonymous

To create similar expressions is a particular challenge to gifted students. To write a story or poem where the assignment calls for one of the lines to conform to the reversal pattern (of the aphersal) is germane to the requirements of both flexible thinking and original thinking -- key elements in William's model for implementing cognitive and affective behaviours and a central area in Calvin Taylor's Multi-talent Totem Pole model.

* * * * *

Similar in nature, but different in structure (to the aphersal) is the challenge to gifted students to create *Incongruous Conclusions*. In this instance the accepted words of a well-know quotation begin the expression, while an incongruous ending for the purpose of creating humour concludes it. Anonymous examples to serve as models might include:

"Change is inevitable, except from a vending machine."

"Where there's a will, I want to be a beneficiary."

"Just when you think you've hit bottom, someone tosses you a shovel."

"If at first you don't succeed, skydiving's not for you."

"I have not yet begun to procrastinate."

QUOTATIONS AND MISSIONS

I credit Stephen Covey for this excellent use of quotations. In his recently-released book *The 7 Habits of Highly Effective Teens* (New York, A Fireside Book published by *Simon & Schuster*, 1998) he makes the following suggestion:

> Collect one to five of your very favorite quotes onto one sheet of paper. The sum of these quotes then becomes your mission statement. For some, great quotes are very inspiring, and this method

works well for them (p. 90).

Following Covey's advice, and some examples students may wish to consider as they formulate a personal mission statement could include:

"So much is a man worth as he esteems himself."
- Francois Rabelais (1495-1553)

"We are as much alive as we keep the world alive."
- Chief Dan George (1899-1981)

"We have to accept personal responsibility for uplifting our lives."
- Chogyam Trungpa

"Success is a journey, not a destination."
- Ben Sweetland

"From now on, any definition of a successful life must include serving others."
- George Bush

"You should pray for a sound mind in a sound body."
- Decimus Junius Juvenal (50c. - 130)

CONCLUSION

In his book *Dumbing Us Down: The Hidden Curriculum of Compulsory Schooling* (Philadelphia, New Society Publishers, 1992), John Taylor Gatto, New York State Teacher of the Year for 1991, makes a damning indictment of the public educational system. He writes in part:

1. The children I teach are indifferent to the adult world.
2. The children I teach have almost no curiosity, and what little they do have is transitory.
3. The children I teach have a poor sense of the future, of how tomorrow is inextricably linked to today.
4. The children I teach are ahistorical. . .
5. The children I teach are cruel to each other. . .
6. The children I teach are uneasy with intimacy or candor.
7. The children I teach are materialistic. . .
8. The children I teach are dependent, passive, and timid in the presence of new challenges (pp. 30-32).

Given that "modern" society still believes in sequestering children for one-half of each year in compartmentalized, frequently architecturally antiquated, factory-style institutions, and then releasing them to be bombarded by the dogma of acquisition preached through the curriculum of television, can Gatto's observations from 26 years of teaching be anything but right? What's to be done to restore meaning and purpose to the lives of those disengaged and disaffected?

Since schooling as we know it is not going to go away, part of reform must begin within its existing structures. And it is here that a quotations-based curriculum reveals its greatest merits. For through quotations students can study the lives of great thinkers from the past whose ideals influenced those in more modern times, and by so doing come to understand and value the continuity of history. Through quotations students can investigate the context of meaning in which historical events occur. Through quotations students can confirm those enduring principles of responsibility, virtue, ethics, morality, and integrity admired by all cultures throughout the continuum of time. Through quotations students can explore and develop the diverse forms of creativity that have enlightened the world's stages and libraries with beauty. Through quotations students can begin to develop their personal lives. ☙ ☙ ☙ ☙

☆☆☆☆☆☆☆☆☆☆ ☆☆☆☆☆☆☆☆☆☆ ☆☆☆☆☆☆☆☆☆☆ ☆☆☆☆☆☆☆☆☆☆

Announcement From Dr. Linda Silverman

Call for Manuscripts for the Journal, Advanced Development **Topic: Spirituality and Giftedness**
Guest Editor: Kathleen Noble

Research into the relationship between spirituality and giftedness is a complex, embryonic, and multi-disciplinary undertaking. This special issue of Advanced Development will explore the phenomenon of spiritual awareness and its role in psychological, cognitive, affective, and moral development. We invite original and unpublished material on the following topics: spirituality and psychotherapy with gifted adults; research on spiritual intelligence; gifted children's spiritual experiences; spirituality and gifted education; literature reviews on spirituality and advanced development; exemplars of spiritually gifted adults. Also relevant are essays exploring definitions of spirituality and the methodological issues that are involved in studying spirituality. **Manuscript due date: July 15, 1999.**

Send questions and submissions to: Kathleen Noble, Center for Capable Youth, University of Washington, Box 351630, Seattle, WA 98195-1630. ★★★★★

Comments from Mary Meeker, Psychologist and Educator

Dear Maurice:

Some comments on the information in your last few newsletters, if you don't mind. I usually stay fairly silent, but sometimes another voice needs to be heard. The general difference I have with many of the writers in the gifted field has to do with the background and focus of the writers. Most of them are educational, curriculum or philosophical in their orientation.

My focus has always been the minority voice -- the psychology of giftedness. For, if the notion that academic achievement is the measure of human giftedness continues unchallenged, then the support of parents, legislators and the gifted themselves will hardly be enlarged, except on the part of those whose outlook stays focused on the academic curriculum as the answer -- it is this attitude that puts people off.

There are several considerations that deserve acknowledgment if we want to make giftedness acceptable to the non-gifted. The people hell-bent on the classics, on academic achievement cannot provide a service to the systems which educate our gifted, not today. Please hear me out:

1) There is no discriminatory hate more prevalent, less uttered, than that against gifted achievers -- with the exception of gifted athletes in sports. This is also true among professional educators themselves who, not gifted, simply do not cooperate when they are behind closed doors, and in fact wreak havoc on gifted students. Regarding this point, educators who grade gifted students on a bell shaped curve, when these children by definition are in the upper two to five percent, should be educated themselves, because the results -- lowered grades that prohibit their acceptance in colleges of their choices, lowered self-esteem, eroded relations between parents and children -- take their toll on human potential.

One resolution to this problem has lain in the acceptance by some educators of the Structure of Intellect (SOI) and differential intellectual abilities -- but for years I was talking in the wind; even after years of success with SOI diagnoses and training materials that maintain gifted abilities and address undeveloped abilities.

The importance of addressing undeveloped abilities lies in the need for gifted children to compete with each other successfully when they may have a vastly different set of strengths and weaknesses on their SOI profiles -- yet they are grouped together in the same gifted classes.

2) In the competitive schoolroom, as in the workplace, of the 26 known abilities which are differentially required for mastering math, language arts, social sciences and science, (SOI, 1974), a deficiency in any area, leads to poor achievement. In fact, I must smile when I read, as continually published -- girls do not go into math and science. Believe me, Maurice, the causes are simple. It begins with the gender differences in their neural networks within the hemispheres at birth. The schools that take this fact into account and begin with SOI diagnoses early, then teach the undeveloped abilities, have girls who succeed in arithmetic and math -- and since this has occurred during the early pre-SOI tests, many of these girls have gone into math and science fields.

3) Another issue often reported and ignored is the high percentage of suicides among gifted boys -- boys who, unable to compete successfully for many of the reasons cited above, and who by nature show such extreme sensitivity they cannot handle stress.

4) This leads to a fourth major issue -- the psychology and social development of gifted boys in particular. Primary educators have a great advantage in shaping the future of these boys by extra care and understanding of their psychology. This attention will make their adolescence somewhat easier. (I am writing a book on this issue.)

5) This is only a portion of the excellent information the social and neurological sciences have given us. But the academic curriculum will not change, cannot change because it is based on knowledge of the past – it is the past.

Human beings have changed; their needs have changed, and the technology they must master changes most of all. The fortunate 'haves,' whose fathers or mothers work with technology, have a good chance to stay with it. But the gap between the haves and have-nots will only widen until technology and changes are properly incorporated into the public schools.

Mary Meeker, President

SOI Systems, Vida, Oregon

Dear Mary – As an educational psychologist, I strongly support the need for more psychology based approaches in the study of giftedness. This is why we need to learn more about your current worldwide work in applying SOI theory. However, I also believe that the past should not be ignored – a humanities curriculum, the work of psychologists such as yourself, and the best technology should be combined to produce the most effective gifted programs.

Maurice

Continued from p. 1 –
victory in the Pan American Chess Championship. Why this high level of support? The president and faculty have set the tone by recruiting and supporting top chess players. "Chess can really set the tone for this university, our emphasis on the value of being a good thinker, a good problem solver, with great discipline. This is not a party school." (President Freeman A. Hrabowski III, p.A7)

In this issue of ***GEPQ***, Dr. Lynn Fox discusses a problem of serious concern among teachers and parents -- the gifted student who is learning disabled. Her article describes one of the best programs for educating these children, the Lab School of Washington, D.C. located at American University, which has been operating since 1967 under the direction of Professor Sally Smith. The second article by Ross Butchart from the Vancouver, British Columbia Public Schools provides more details concerning his Quotations Curriculum. It provides a stimulating method for differentiating the education of intellectually advanced students. He originally wrote about this topic in the Summer 1995 issue of ***GEPQ***.

The current issue also includes an important announcement from Linda Silverman concerning the journal, ***Advanced Development***, an interesting letter from Mary Meeker regarding previous issues, and an essay by Michael Walters on a new book by Wayne Dyer. ★ ★

Maurice D. Fisher, Publisher

A Study of Gifted Individuals: A Book for the Ages by Wayne Dyer Reviewed by Michael E. Walters Center for the Study of the Humanities in the Schools

"The traits of these self-actualizers included appreciation for beauty, sense of purpose, resistance to enculturation, welcoming the unknown, high enthusiasm, inner-directedness, detachment from outcome, independence of the good opinion of others, and absence of a compelling need to exert control over others. . . ." (p. 207).

This description of self-actualizing individuals is in a recent book by Wayne W. Dyer, **Wisdom of Ages: A Modern Master Brings Eternal Truths into Everyday Life** (1998, HarperCollins). Self-actualizing personalities possess a sensibility of giftedness as demonstrated by Dyer's list of characteristics, and these traits are also found in the gifted child.

Dyer writes about gifted individuals throughout history. He places each of his personalities within the context of a theme such as meditation, knowing, leadership, patience and inspiration. Each chapter begins with a quote from that individual -- after analyzing the significance of this quote, he then discusses its implications.

The range of individuals that Dyer includes in his book represents multi-culturalism in both history and interdisciplinary activities. On a historical level, he discusses such individuals as Pythagoras, an ancient mathematician-philosopher (580-500 BC), Leonardo da Vinci of the Renaissance (1453-1519), William Blake, the British poet and artist (1752-1827), and Mother Teresa, a Nobel Peace Prize winner (1910-97). The interdisciplinary nature of the book is shown by the author's use of scientists, religious figures, writers and social thinkers such as Mahatma Gandhi (1868-1948), and The Reverend Martin Luther King, Jr. (1929-68).

The themes Dyer explores are also personality traits found in the gifted individual. A few examples will clearly illustrate what he perceives as representing the sensibility of giftedness. Some of these are: meditation (Blaise Pascal and Pythagoras), balance (Leonardo da Vinci), boldness-action (Johann Wolfgang von Goethe), visualization (William James), and action-doing (Mother Teresa).

Teachers of the gifted will benefit from reading this book on two basic levels. First, they will be able to understand the sensibility of giftedness in living terms as expressed by obviously gifted people who are universally recognized as significant individuals in their fields of endeavor. Second, teachers will experience how the traits of giftedness are applied in a concrete manner. Gifted students will enjoy reading this book because it provides them with paradigms for their inner selves. Dyer's writing is easily understood and his examples are presented in a vivid, inspiring and concrete manner. Few abstract and useless academic exercises can be found in this book. It contains functional wisdom that has relevance for our daily lives. **Wisdom of the Ages** is like a textbook on applying the sensibility of giftedness.

In the chapter on "Action/Doing," Dyer's description of Mother Teresa's ability to transform human beings from cynicism to idealism is explained as follows: ". . .she created a meeting point rather a preaching point." (p. 262). This example from Mother Teresa should be heeded by educators of the gifted.

GIFTED EDUCATION PRESS QUARTERLY

10201 YUMA COURT
P.O. BOX 1586
MANASSAS, VA 20108
703-369-5017

SUMMER 1999
VOLUME THIRTEEN, NUMBER THREE

LIFETIME SUBSCRIPTION: $22.00

www.cais.com/gep

MEMBERS OF NATIONAL ADVISORY PANEL

Dr. James Delisle – Professor and Co-Director of *SENG*, Kent State University, Kent, Ohio

Dr. Jerry Flack - Professor, University of Colorado, Colorado Springs

Dr. Howard Gardner – Professor, Graduate School of Education, Harvard University, Cambridge, Massachusetts

Ms. Diane D. Grybek - Supervisor of Secondary Gifted Programs (Retired), Hillsborough County Schools, Tampa, Florida

Ms. Dorothy Knopper - Publisher, Open Space Communications, Boulder, Colorado

Mr. James LoGiudice - Director, Program and Staff Development, Bucks County, Pennsylvania IU No. 22 and Past President of the Pennsylvania Association for Gifted Education

Dr. Mary Meeker – President of SOI Systems, Vida, Oregon

Dr. Adrienne O'Neill – Johnson & Wales University, Providence, Rhode Island

Dr. Stephen Schroeder-Davis – Coordinator of Gifted Programs, Elk River, Minnesota Schools and, Past President of the Minnesota Council for the Gifted and Talented

Dr. Bruce Shore – Professor and Director, Giftedness Centre, McGill University, Montreal

Ms. Joan Smutny - Professor and Director, Center for Gifted, National-Louis University, Evanston, Illinois

Dr. Virgil S. Ward – Emeritus Professor of Gifted Education, University of Virginia, Charlottesville, Virginia

Ms. Susan Winebrenner - Consultant, Brooklyn, Michigan

Dr. Ellen Winner – Professor of Psychology, Boston College

Recent publications by members of our advisory panel which are highly relevant to educators of the gifted are: Dr. Howard Gardner's recent book, **The Disciplined Mind: What All Students Should Understand** (Simon & Schuster, 1999), provides much useful information for the rigorous study of the basic disciplines of human knowledge, and it should be of particular relevance in designing a challenging curriculum for the gifted based on questioning, understanding and problem solving. I will review this book in the August-September 1999 issue of ***Gifted Education News-Page***. (Please contact me if you would like to receive a copy of this issue.) Joan Smutny has served as Guest Editor for the February/March 1999 issue of ***Roeper Review*** which concentrates on research and theory related to educating young gifted children. This excellent issue contains information on such topics as identification, highly gifted children in the early years, curriculum design, and the application of Piaget's equilibration theory to studying reasoning processes. Ms. Smutny has also published an informative article for parents of young gifted children in the March 1999 issue of ***Parenting for High Potential***.

The tragic student deaths in Littleton Colorado need to be analyzed in the context of how gifted adolescents are educated in today's schools, since the perpetrators and many of their friends were very bright but lacking the necessary skills for coping with a socially hostile environment. First, secondary level educators need to take a closer look at the affective and social areas of development. In this regard, the work of James DeLisle and James Webb on Supporting the Emotional Needs of the Gifted (SENG) should be more closely studied and applied to helping high ability teenagers vent their anger and frustration in more positive directions. Second, the work of Stephen Schroeder-Davis on Coercive Egalitarianism can help both non-gifted and gifted students understand the characteristics and problems of the latter group. ***Gifted Education Press*** has published a book by Schroeder-Davis entitled, **Coercive Egalitarianism: A Study of Discrimination Against Gifted Children** (1993). I believe that the concepts developed by DeLisle, Webb and Schroeder-Davis represent very important work in the gifted field.

The first article in this issue of ***GEPQ*** by Dr. Howard Gardner discusses the problem of defining intelligence -- particularly as related to Daniel Goleman's emotional intelligence and Robert Coles' moral intelligence. Gardner emphasizes the need for using rigorous criteria to define intelligence; based upon applying these criteria, he rejects both concepts as being distinct forms of intelligence. Gardner's critique suggests that educators and parents should be considerably more cautious in using certain traits and characteristics as indicators of intelligence.

Continued at the bottom of p. 11

BEST COPY AVAILABLE

THE BORDERS OF INTELLIGENCE*

BY HOWARD GARDNER HARVARD UNIVERSITY

Writing as a scholar rather than as a layperson, I see two problems with the notion of emotional intelligence. First, unlike language or space, the emotions are not contents to be processed; rather, cognition has evolved so that we can make sense of human beings (self and others) that possess and experience emotions. Emotions are part and parcel of all cognition, though they may well prove more salient at certain times or under certain circumstances: they accompany our interactions with others, our listening to great music, our feelings when we solve — or fail to solve—a difficult mathematical problem. If one calls some intelligences emotional, one suggests that other intelligences are not—and that implication flies in the face of experience and empirical data.

The second problem is the conflation of emotional intelligence and a certain preferred pattern of behavior. This is the trap that Daniel Goleman sometimes falls into in his otherwise admirable *Emotional Intelligence*. Goleman singles out as emotionally intelligent those people who use their understanding of emotions to make others feel better, to solve conflicts, or to cooperate in home or work situations. No one would dispute that such people are wanted. However, people who understand emotion may not necessarily use their skills for the benefit of society.

For this reason I prefer the term "emotional sensitivity"—a term (encompassing my interpersonal and intrapersonal intelligences) that could apply to people who are sensitive to emotions in themselves and in others. Presumably, clinicians and salespeople excel in sensitivity to others, poets and mystics in sensitivity to themselves. And some autistic or psychopathological people seem completely insensitive to the emotional realm. I would insist, however, on a strict distinction between emotional sensitivity and being a "good" or "moral" person. A person may be sensitive to the emotions of others but use that sensitivity to manipulate or to deceive them, or to create hatred.

I call, then, for a delineation of intelligence that includes the full range of contents to which human beings are sensitive, but at the same time designates as off limits such valued but separate human traits as creativity, morality, and emotional appropriateness. I believe that such a delineation makes scientific and epistemological sense. It reinvigorates the elastic band without stretching it to the breaking point. It helps to resolve the two remaining struggles: how to assess, and what kinds of human beings to admire.

Once we decide to restrict intelligence to human information-processing and product-making capacities, we can make use of the established technology of assessment. That is, we can continue to use paper-and-pencil or computer-adapted testing techniques while looking at a broader range of capacities, such as musical sensitivity and empathy with others. And we can avoid ticklish and possibly unresolvable questions about the assessment of values and morality that may well be restricted to a particular culture and that may well change over time.

Still, even with a limited perspective on intelligence, important questions remain about which assessment path to follow—that of the purist, the simulator, or the skeptic. Here I have strong views. I question the wisdom of searching for a "pure" intelligence—be it general intelligence, musical intelligence, or interpersonal intelligence. I do not believe that such alchemical intellectual essences actually exist; they are a product of our penchant for creating terminology rather than determinable and measurable entities. Moreover, the correlations that have thus far been found between supposedly pure measures and the skills that we actually value in the world are too modest to be useful.

What does exist is the use of intelligences, individually and in concert, to carry out tasks that are valued by a society. Accordingly, we should be assessing the extent to which human beings succeed in carrying out tasks of consequence that presumably involve certain intelligences. To be concrete, we should not test musical intelligence by looking at the ability to discriminate between two tones or timbres: rather, we should be teaching people to sing songs or play instruments or transform melodies and seeing how readily they master such feats. At the same time, we should abjure a search for pure emotional sensitivity—for example, a test that matches facial expressions to galvanic skin response. Rather, we should place (or observe) people in situations that call for them to be sensitive to the aspirations and motives of others. For example, we could see how they handle a situation in which they and colleagues have to break up a fight between two teenagers, or persuade a boss to

* The following excerpt comes from an article entitled "Who Owns Intelligence?" which appeared in the February 1999 issue of THE ATLANTIC MONTHLY. The article is copyrighted by Howard Gardner and the excerpt appears by permission. Individuals who wish to have a copy of the entire article should send a check for $4 made out to Harvard University, to Howard Gardner, Larsen Hall 201, Harvard Graduate School of Education, Cambridge, MA 02138.

change a policy of which they do not approve.

Here powerful new simulations can be invoked. We are now in a position to draw on technologies that can deliver realistic situations or problems and also record the success of subjects in dealing with them. A student can be presented with an unfamiliar tune on a computer and asked to learn that tune, transpose it, orchestrate it, and the like. Such exercises would reveal much about the student's intelligence in musical matters.

Turning to the social (or human, if you prefer) realm, subjects can be presented with simulated interactions and asked to judge the shifting motivations of each actor. Or they can be asked to work in an interactive hypermedia production with unfamiliar people who are trying to accomplish some sort of goal, and to respond to their various moves and countermoves. The program can alter responses in light of the moves of the subject. Like a high-stakes poker game, such a measure should reveal much about the interpersonal or emotional sensitivity of a subject.

A significant increase in the breadth—the elasticity—of our concept of intelligence, then, should open the possibility for innovative forms of assessment far more realistic than the classic short-answer examinations. Why settle for an IQ or an SAT test, in which the items are at best remote proxies for the ability to design experiments, write essays, critique musical performances, and so forth? Why not instead ask people actually (or virtually) to carry out such tasks? And yet by not opening up the Pandora's box of values and subjectivity, one can continue to make judicious use of the insights and technologies achieved by those who have devoted decades to perfecting mental measurement.

To be sure, one can create a psychometric instrument for any conceivable human virtue, including morality, creativity, and emotional intelligence in its several senses. Indeed, since the publication of Daniel Goleman's book dozens of efforts have been made to create tests for emotional intelligence. The resulting instruments are not, however, necessarily useful. Such instruments are far more likely to satisfy the test maker's desire for reliability (a subject gets roughly the same score on two separate administrations of the test) than the need for validity (the test measures the trait that it purports to measure).

Such instruments-on-demand prove dubious for two reasons. First, beyond some platitudes, few can agree on what it means to be moral, ethical, a good person: consider the differing values of Jesse Helms and Jesse Jackson, Margaret Thatcher and Margaret Mead. Second, scores on such tests are much more likely to reveal test-taking savvy (skills in language and logic) than fundamental character.

In speaking about character, I turn to a final concern: the relationship between intelligence and what I will call virtue—those qualities that we admire and wish to hold up as examples for our children. No doubt the desire to expand intelligence to encompass ethics and character represents a direct response to the general feeling that our society is lacking in these dimensions; the expansionist view of intelligence reflects the hope that if we transmit the technology of intelligence to these virtues, we might in the end secure a more virtuous population.

I have already indicated my strong reservations about trying to make the word "intelligence" all things to all people—the psychometric equivalent of the true, the beautiful, and the good. Yet the problem remains: how, in a post-Aristotelian, post-Confucian era in which psychometrics looms large, do we think about the virtuous human being?

My analysis suggests one promising approach. We should recognize that intelligences, creativity, and morality—to mention just three desiderata—are separate. Each may require its own form of measurement or assessment, and some will prove far easier to assess objectively than others. Indeed, with respect to creativity and morality, we are more likely to rely on overall judgments by experts than on any putative test battery. At the same time, nothing prevents us from looking for people who combine several of these attributes—who have musical and interpersonal intelligence, who are psychometrically intelligent and creative in the arts, who combine emotional sensitivity and a high standard of moral conduct.

Let me introduce another analogy at this point. In college admissions much attention is paid to scholastic performance, as measured by College Board examinations and grades. However, other features are also weighed, and sometimes a person with lower test scores is admitted if he or she proves exemplary in terms of citizenship or athletics or motivation. Admissions officers do not confound these virtues (indeed, they may use different scales and issue different grades), but they recognize the attractiveness of candidates who exemplify two or more desirable traits.

We have left the Eden of classical times, in which various intellectual and ethical values necessarily commingled, and we are unlikely ever to re-create it. We should recognize that these virtues can be separate and will often prove to be remote from one another. When we attempt to aggregate them, through phrases like "emotional intelligence," "creative intelligence," and "moral intelligence," we should realize that we are expressing a wish rather than denoting a necessary or even a likely coupling.

We have an aid in converting this wish to reality: the existence of powerful examples—people who succeed in exemplifying two or more cardinal human virtues. To name names is risky—particularly when one generation's heroes can become the subject of the next generation's pathographies. Even so, I can without apology mention Niels Bohr, George C. Marshall,

Rachel Carson, Arthur Ashe, Louis Armstrong, Pablo Casals, Ella Fitzgerald.

In studying the lives of such people, we discover human possibilities. Young human beings learn primarily from the examples of powerful adults around them—those who are admirable and also those who are simply glamorous. Sustained attention to admirable examples may well increase the future incidence of people who actually do yoke capacities that are scientifically and epistemologically separate.

In one of the most evocative phrases of the century the British novelist E. M. Forster counseled us, "Only connect." I believe that some expansionists in the territory of intelligence, though well motivated, have prematurely asserted connections that do not exist. But I also believe that as human beings, we can help to forge connections that may be important for our physical and psychic survival.

Just how the precise borders of intelligence are drawn is a question we can leave to scholars. But the imperative to broaden our definition of intelligence in a responsible way goes well beyond the academy. Who "owns" intelligence promises to be an issue even more critical in the next century than it has been in this era of the IQ test. ★ ★ ★

☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆

GIFTED STUDENTS + LAUGHTER = LEARNING - STRESS

BY DAN HOLT MacMURRAY COLLEGE JACKSONVILLE, IL

It is well established that humor is one of the main identifying characteristics of gifted children (Clark, 1980; Gallagher, 1985; Renzulli, 1976; Silverman, 1989; Torrance, 1974; Tuttle, Becker, & Sousa, 1988; Van Tassel-Baska, 1989). This is because there exists a significant link between humor and intelligence (Brodzinsky & Rightmyer, 1980; Holt & Willard-Holt, 1995; Webb, et al., 1989; Ziv, 1981, 1990). Getzels and Jackson (1962) found that creative, gifted students consider humor much more important than do their non-gifted peers. Does this mean that gifted students are perceived as more humorous than their non-gifted peers? The answer is, as with most things, a qualified yes.

The ability to understand and use humor in the manipulation of language clearly involves metalinguistic skills and is consistent with gifted children's cognitive skills (Bernstein, 1986). Mental flexibility includes the passive abilities to cope with change, see things more objectively, and the active abilities to think creatively, solve problems, and take risks (Morreall, 1991). Gifted students seem to have the capacity for more mental flexibility than their peers do in the general population. However, the ability to perceive, identify, comprehend, and respond to humor does not mean they can produce it. In fact, this can be very challenging to a highly gifted student. The attempt at producing humor can either ingratiate them with or alienate them from their peers.

Gifted children find quite often that their humor, as with many other interactions with peers, is not always understood or appreciated. Why? The question "do ya get it?" referring to the punch line of a joke illustrates the common knowledge that being able to understand is a prerequisite of enjoying humor as discussed above. "Eschew Obfuscation" will not be humorous unless the meaning of each word is known. A gifted child, taking for granted that peers know these words, would be very disappointed if the attempt at humor falls flat. One reason gifted students tend to relate better to older children and adults is that their humor, as well as other interactions, are on more equal, and therefore less frustrating, grounds. In dealing with this and other frustrations, gifted students may resort to the negative use of humor (Holt & Willard-Holt, 1995).

Humor is a natural defense mechanism against the deleterious effects of stress. We cannot, and should not, shelter students from stress and upset, but we can, and should, provide them with training in the ways to cope with that stress and upset. The use of positive humor can be taught (Holt, 1994). Too often, though, the classroom itself becomes the source of stress for students. Usually this occurs when the teacher is not having fun and the atmosphere of the classroom is one that allows for no humor, or if the humor that is employed is negative and hurtful, stress producing instead of stress relieving. Some people seem to send the message loudly and clearly "Don't laugh! You'll interrupt my depression."

Positive humor in the classroom does not mean learning is not taking place. Learning involves the complete self, including emotions. There is nothing that indicates that our emotion and the ability to learn is separate one from the other; actually, research has shown quite the contrary (Caine & Caine, 1991). As an example, it is well established that the creative process is enhanced when the barriers of self-censorship are broken down with laughter. Laughter, humor, and the ability to perceive from different perspectives allow us to bring together thoughts that we normally keep separate due to preconceived barriers of "right" and "wrong", or "silly" and "nonsense." In order to

learn, not just react, we must feel secure in our environment. In order to laugh with genuine feelings of joy, not in reaction to anxiety, we also need the feeling of security. It would seem, then, that we could combine the two and enhance our learning environments by creating an atmosphere of joy...the joy of learning.

Negative Aspects of Humor

A source of complexity and confusion that has led to disagreements among theorists is the variety of functions that humor appears to serve. There is disagreement concerning whether humor is fundamentally positive and constructive or negative and destructive. Humor may be seen to reflect the ugly, aggressive aspects of human nature, or it may be associated with the sublime, joyful, and innocent. Various theorists have differed in the way in which they view humor and either point out that it is a "...gift handed down from the gods or a scourge delivered up from the devils" (Keith-Spiegel, 1972, p.25).

Inappropriate laughter or humor is, of course, not healthy. Laughter that stems from ridicule does not make us feel better about another or ourselves. Ridicule is one of society's methods of preserving the status quo. Stereotypical jokes, which put down groups of people, have three purposes. The first purpose is to support prejudices by drawing others into agreement through laughter. It would then follow that the second purpose is to make the joke teller feel good; if he/she is the instigator of the laughter, then he/she feels good about him/herself in spite of the joke's hateful message. The third purpose is to reinforce the stereotype so that there is no threat to the status quo.

When we try to let go of our stress through laughter obtained by ridiculing and gossiping, and there is a connection between ridicule and gossip, we know we may ourselves end up as targets of ridicule and gossip. The old saying, "What goes 'round, comes 'round" has a ring of truth. By doing this, we are causing even more stress within ourselves than was coming from the outside world. We are creating a non-trusting, emotionally unsafe environment. If that environment is our work place (classroom) then we are faced with a hostile environment during about a third of our lives and that will spill over into the other two-thirds rapidly.

Laughing at ourselves is very important, as long as we do not ridicule ourselves in the process. Laughing at our own group often serves as a way of keeping the group separate and cohesive in order to protect itself. Very often we put down our own groups in the same way other groups put us down, thus perpetuating the racism, sexism, or whateverism that is coming from the outside. This undermines our group (or personal) self-image so that we cling to each other in fear. People often joke about their weight, height, or age in a very put-down sort of way, thus keeping control and diffusing any real or imagined tension with laughter. However, it is possible to laugh at ourselves without self-deprecation or self put-down. We can merely relate the facts of our experience or situation without any judgment or criticism.

Teasing is another way of attempting to control other people and situations. Teasing is defined as using, without permission, inside information about how someone feels, in other words, emotional manipulation. The key word here is permission. Most teasing is done without permission. When we tease someone, we expect him or her to be a good sport (laugh) when we are misusing inside information about them. This is a form of emotional abuse. Teasing plays with another person's pain, attempting to get the teased person to react so the teaser can laugh. If the person being teased objects and says, "you're hurting my feelings," that person will most likely be accused of being too sensitive. The teaser will say, "I was only teasing! Can't you take a joke?" This adds insult to injury. Most of us have been teased as children, and consequently, we tease each other. Very few of us have taken the time to think about what teasing does, where it comes from, or what it is. I believe teasing revolves around issues of powerlessness, embarrassment, hostility, and anger. Teasing is very confusing because it sends a mixed message. When teased, we are uncertain whether the teaser is trying to make affectionate contact with us in some strange way, or whether the teaser is actually expressing hostility. If we are angry with someone, we need to express it directly: "I am very angry." If we feel affectionate toward someone, it is most effective to say, "I like you." However, to tease is to say neither and both. This lack of clarity creates more tension and stress. I would point out that no child gives an adult permission to tease them, especially a teacher in a classroom.

Another area I will mention in passing is tickling. We cannot tickle ourselves. Therefore, it has to do with an interaction between two or more persons, and it creates tension, which is then expected to be released in laughter. Tickling between consenting peers is not hurtful and can be very enjoyable, but most frequently tickling occurs without permission between people of different physical sizes and/or strengths. I would suggest you consider that tickling can be a very strong form of aggressive manipulation. Usually, it is not intended to be violent, but it nonetheless invades our personal space and stimulates the lighter levels of fear and anger.

In addition, another area, which should be briefly mentioned, is the different perception of humor by males and females. Typically, males will razz, tease, and use mock hostile attacks to try to express humor. The competitiveness, the aggression is being dealt with in what males consider a playful manner. Between males this is, for the most part, understood and accepted (remember the discussion above though). The problems occur when males try the same type of humor with females, because the females will usually take what the males

are saying as genuine. The other side is that females have a tendency to use self-mocking types of humor and, of course, the males believe the females are serious. Wham! Instant miscommunication.

Humor and laughter can represent a powerful social corrective force that can be used to humiliate and correct those who do not conform to social expectations. It is also interwoven, in a complex manner, with all relationships. To deny the negative aspect of humor is unrealistic, but the belief that humor is exclusively a negative part of the human experience is a denial of that which adds joys to life itself.

We are not born with a sense of humor, but we are born laughers. Laughter changes our attitudes and our perspective, and from that, we can develop a sense of humor, or a way of viewing the world playfully. This allows our sense of humor to be inclusive of all people and not dependent on a specific joke or topic. An inclusive sense of humor is WARM and connected, broad and universal. It allows us to play with situations that are stressful instead of playing with others' pain to create laughter (Goodheart, 1994). Therefore, we as parents and teachers, can have an enormous influence on the development of the sense of humor in the children in our lives by modeling positive humor.

The Positive Perspective of Humor

Humor has been thought of as positive for probably as long as it has been considered negative. Throughout history, various writers have stressed the beneficial effects of humor. To possess a good sense of humor has been considered a sign of a healthy, well-integrated personality. One of the earliest admonitions is found in the Bible, which states "...a merry heart doeth good like a medicine" (Proverbs 17:22). Kant wrote in *Critique of Judgment* (1790):

> In the case of jokes, we feel the effect of this slackening in the body by the oscillation of the organs, which promotes the restoration of equilibrium and has a favorable influence upon health (p.96).

Herbert Spencer (1860) put forth the theory that laughter is a mechanism for releasing excess tension and therefore an important restorative mechanism. Sully (1902) argued that laughter is good exercise and reduces unpleasant tension and promotes digestion. Others, such as Armstrong (1921), Bliss (1915), Eastman (1921, 1936), McComas (1923), and Mindess (1971), contended that humor is one of humankind's most noble attributes and reflects an expression of tolerance, acceptance, and sympathy toward other people. They view humor as a liberating force that frees individuals from the often-stifling constraints of social convention and environmental pressures. Mindess (1977) stated that:

> ...giving humor a central place in our repertoire of self-perceptions...we may exert a greater effect on the course and outcomes of our struggles than any one has yet envisualized (p.3).

Torrance (1977) asserted that, "Without humor life would probably be unbearable to most people" (p.52). Humor affects all parts of life and is not limited to either the negative or the positive. We have all laughed at someone and with someone, and know the distinction.

Three Myths about Laughter

Myth #1: A sense of humor and laughter are the same.

A sense of humor is learned, but laughter is innate. A sense of humor is an intellectual process, whereas laughter spontaneously engages every major system of the body. In the natural human process of healing and changing, we "move" our emotions. First, we become aware of our painful emotions; then we release the associated tension through the appropriate form of catharsis (such as laughter or crying). We then automatically rethink the situation. Catharsis results in clearer thinking, which in turn enables us to take sensible, more appropriate action. If this natural process is not allowed, we become increasingly rigid and reactive, repeating behaviors that are increasingly unsuccessful. We know that positive humor can be taught in the classroom (Holt, 1993, 1996) and can exist in the work place (Lane, 1993). We also know that the benefits can produce not only emotional well being, but also better physical health.

Myth #2: You need a reason to laugh.

Many of us unconsciously censor our laughter because at some level we think our reason for laughing is not good enough. It is important to note here that reality is that laughter *is* unreasonable, illogical, and irrational. We do not need a reason to laugh. When we see a six-month-old baby laughing, we do not demand, "What's so funny?" but rather delight in the response and often join in the laughter. We can also do this with adults. If you wish to stop someone from laughing simply ask them why they are laughing. When we begin to think, instead of respond, we stop laughing. This is very important to remember when we are in situations where laughter is inappropriate...say when you are pulled over by a police officer or a teacher.

Myth #3: We laugh because we are happy.

Beverly Sills has been quoted as saying "I'm a cheerful woman, not a happy one--A happy woman has no cares--a cheerful one has cares, but has learned to laugh about them." The reality is we are happy because we laugh. Those of us who have laughed until we have cried know that in the middle of the process, we cannot tell which is which. We do not laugh because we are

happy and cry because we are sad--we laugh or cry because we have tension, stress, or pain. Laughter and tears re-balance the chemicals our body creates when these distressed states are present, and so we feel better after we have laughed or cried. Many of us will not laugh because we believe that it indicates we are happy when we know we are not. However, if we can override this self-imposed restriction when we feel stress, tension, or pain and just join in the laughter around us, we will find it is contagious and often we can experience the state we call happiness. Many hearse drivers relate that they experience the family members of the deceased laughing on the drive to the cemetery. We need to realize that these people are not laughing because they are happy, but because the laughter is releasing the emotions and allowing a physical re-balancing of the chemicals.

The Physical Effects of Humor and Laughter

> When one is laughing, one's attention is focused. One cannot do anything else or think of anything else. Everything else, whether it is depression or stress, stops (Leone, 1986, p 139).

A large body of evidence in the field of psycho-neuroimmunology is providing evidence that the impact of humor plays a significant role in maintaining good health, and in recovering from poor health. Pessimism, a negative attitude, negative emotions, a feeling of helplessness, hopelessness, and giving up play equally important roles in breaking down our health, and in blocking recovery from poor health. Humor appreciation and physiological arousal are interrelated. In a study conducted by Schachter and Wheeler (1962), groups of experimental subjects were divided into three sub-groups. One sub-group was given an injection of the hormone epinephrine (adrenaline), the second sub-group an injection of plain saline, and the third sub-group an injection of a drug called chlorpromazine (a mild tranquilizer). None of the subjects was informed as to which substance he/she had received, or whether it was any different from what any other subject had been given. All subjects were shown a movie and subsequently were asked to rate the movie with respect to how funny it was. The results were that those who received the epinephrine (stimulant) rated the movie as very humorous, those who were injected with the saline rated the movie as "okay", and the group that received the chlorpromazine (tranquilizer) failed, as a group, to appreciate the humor in the film. This study provided some of the first documented evidence that humor is not just psychological, but has a profound connection with the physiological states of the body.

Various research studies have validated the mind/body connection. Children with Hemophilia have actually been known to bleed not only from physical injuries, but also from feelings of sadness (Klein, 1989). Findings such as this, among many others, indicate that a positive attitude--which a sense of humor can provide--does have a physiological effect. In studying the physical effects of laughter, William Fry, M.D. indicated that research has shown that mirthful laughter affects most, if not all, of the major physiological systems of the human body. The cardiovascular system, for example, is exercised as the heart rate and blood pressure rise and fall in laughter. The heavy breathing creates a vigorous air exchange in the lungs and provides a healthy workout for the respiratory system. The muscles release tension as they go through the isometric exercises of tightening and relaxing during laughter. In addition, opiates may be released into the blood system, creating the same feelings that long-distance joggers experience as a "runner's high". Dr. Fry states that twenty seconds of laughter is similar in benefits obtained to an aerobic workout of three minutes of hard rowing (Fry & Salameh, 1986).

Until recently, it was thought that the brain and the immune system were separate and unrelated systems. Then research began providing evidence that the brain and immune system do communicate by means of direct neural connections between the brain and those organs which are central to the production of immune cells (bone marrow, thymus gland, lymph nodes, and spleen). Individual immune cells have receptors capable of receiving chemical messages sent out by the brain. The brain "talks" to the immune system by means of different chemical signals (McGhee, 1991).

Research also indicates that laughter may even increase the production of many types of T cells, which are important in the immune system of the body (Berk, 1991). Berk (1989) reports that since laughter increases the activity of natural "killer cells" we may be helping place our bodies in a better position to fight off any new virus or bacterium, and defend against the proliferation of cancer cells by finding more humor in our lives. Humor has been linked to the increased production of antibodies (immunoglobulin). Immunoglobulin A (IgA), found in the mucous secretions, plays an important role in protecting the body against upper respiratory infections (e.g., the flu and colds). Research has shown that the IgA level can be increased by viewing a one-hour comedy program (Berk, 1991, Dillon et al., 1985; Lefcourt et al., 1990). Dillon and Totten (1989) provided evidence that pregnant women who used humor to help cope with daily stress not only had fewer cases of upper respiratory infections due to higher levels of IgA, but their newborn infants were also less likely to have upper respiratory infections than the newborns of mothers who rarely used humor to cope. Laughter has been shown to increase levels of IgG and IgM, as well (Berk, 1991).

We know that negative moods weaken the immune system (Kemeny, 1984), while positive moods strengthen it due to the increased production of IgA (Stone, 1987). In addition, Berk (1989) has shown that watching a one-hour comedy has led to reduced levels of four neuroendocrine hormones (epinephrine, cortisol, dopac and, growth hormone) associated with the classical stress response. Regular laughter helps prevent the

build-up of stress hormones in the blood. It should be mentioned that these stress hormones weaken the immune system (Borysenko, 1982). Evidence is building that a sense of humor serves as a type of protective buffer against the immunosuppressive effects of stress. Therefore, it can be stated that humor is, at least in part, responsible for maintaining a healthy body by building the immune system and helping to guard against physical problems associated with stress.

Everyday stress which adds up to create intolerable situations (Paydel, 1978) can be effectively coped with by positive humor. If positive humor can be seen as a way to cope with the loss of your keys, being late for a meeting, burning your meal, getting lost, or any of the other hundreds of small daily stressors, then it can be an effective, healthy coping mechanism. Research indicated that gifted adolescents were very receptive to the use of humor and needed only to be given the opportunity and methods for the constructive use of positive humor to be able to make significant changes in handling the stress in their daily lives (Holt, 1994). However, using positive humor to cope with stress is another article.

Positive humor definitely has a place in the classroom. Children use a sense of humor to deal with the world. Moderately gifted children use humor extensively (Ziv, 1984). Several characteristics typical of gifted students can be effectively approached and dealt with by use of positive humor. For example, gifted students are very concerned with issues of justice and fair play (Renzulli, Smith, White, Callahan, & Hartman, 1976). Various social, moral, and ethical issues can be addressed and explored through humor, such as by discussing political cartoons. Perfectionism is a common characteristic of gifted students (Renzulli, et al., 1976). Humor can provide a safe window through which the student can observe, understand, and enjoy the human condition with all its imperfections, such as by viewing well-written situation comedies. The ability to make connections and establish relationships among disparate data is typical of gifted children (Renzulli, et al., 1976). Humor allows for, even encourages, an enhanced awareness of the world and its various juxtapositions. Creativity, flexibility, and self-expression all describe gifted children (Renzulli, et al., 1976). Writing and performing humorous mini-plays, songs, or short stories can help students explore serious situations through humor. Humor provides an outlet for thoughts and feelings and also helps the child develop the ability to be organized in thought and concise in expression.

The enhanced capacity of gifted students' abstract reasoning, frequently combined with accelerated abilities to obtain and process information, enables them to absorb, process, and speculate on concepts not normally encountered until a much older age (Gross, 1989). Hollingworth (1926) noted that while children of average ability are still involved with egocentric concerns, highly gifted children are becoming very aware of questions dealing with origin, destiny, and philosophical issues. Gifted students need positive methods of dealing with the deep, and often depressing, issues of life they become aware of at very young ages. Humor is natural and involved in almost every aspect of life. It is a universal part of the human experience. Positive humor can be the "safety valve" which allows the experience of life to continue, yet keeping the stress of existence from growing to unbearable levels. Besides all that...it feels good! ● ● ● ●

REFERENCES

Armstrong, M. (1921). **Laughing: An essay**. New York: Harper.

Berk, L.S. (1989). Eustress of mirthful laughter modifies natural killer cell activity. **Clinical Research,** 37 (115A).

Berk, L.S. (1991). Immune system changes during humor associated laughter. **Clinical Research,** 39 (124A).

Bernstein, D. (1986). The development of humor: Implications for assessment and intervention. **Topics in Language Disorders,** 6, 65-71.

Bliss, S.H. (1915). The origin of laughter. **American Journal of Psychology,** 26, 236-246.

Borysenko, J. (1982). Behavioral-physiological factors in the development and management of cancer. **General Hospital Psychiatry,** 4, 69-74.

Brodzinsky, D. M., & Rightmyer, J. (1980). Individual differences in children's humour development. In P. McGhee & A. Chapman (Eds.), **Children's humour** (pp. 181-212). Chichester: Wiley.

Caine, R.N., & Caine, G. (1991). **Making Connections: Teaching and the human brain**. Alexandria, VA: Association for Supervision and Curriculum Development.

Clark, B. (1980). **Growing up gifted** (3rd ed.). Columbus: Merrill.

Dillon, K.M., Minchoff, B., & Baker, K.H. (1985). Positive emotional states and enhancement of the immune system. **International Journal of Psychiatry in Medicine,** 5,13-18.

Dillon, K.M., & Totton, M.C. (1989). Psychological factors, immunocompetence, and health of breast-feeding mothers and their infants. **Journal of Genetic Psychology,** 150, 155-162.

Eastman, M. (1921). **The sense of humor**. New York: Scribners.

Eastman, M. (1936). **Enjoyment of laughter**. New York: Simon and Schuster.

Fry, W.F., & Salameh, W.A. (Eds.). (1986). **Handbook of humor and psychotherapy**. Sarasota, FL: Professional Resource Exchange.

Gallagher, J. (1985). **Teaching the gifted child** (3rd ed.). Boston: Allyn and Bacon.

Getzels, J.W., & Jackson, P.W. (1962). **Creativity and intelligence: Explorations with gifted children**. New

York: Wiley.

Goodheart, A. (1994). **Laughter therapy: How to laugh about everything in your life that isn't really funny**. Santa Barbara, CA: Less Stress Press.

Gross, M.U.M. (1989). The pursuit of excellence or the search for intimacy? The forced-choice dilemma of gifted youth. **Roeper Review,** 11 (4), 189-194.

Holt, D.G. (1993). **Cartoon thinking**. East Windsor Hill, CT: Synergetics.

Holt, D.G. (1994). Humor as a coping mechanism: Dealing with manifestations of stress associated with children identified as gifted and talented (Doctoral dissertation, Purdue University, 1993). Dissertation Abstracts International, 54 (7), 2513A.

Holt, D. G. (1996). Positively humorous: Teaching gifted middle school students to use positive humor to cope with stress. **Gifted Child Today**, 19 (1). Waco, TX: Prufrock Press.

Holt, D. G., & Willard-Holt, C. (1995). An exploration of the relationship between humor and giftedness in students. **Humor: International journal of humor research**. 8 (3), 257-271.

Hollingworth, L. (1926). **Gifted children**. New York.

Kant, I. (1790). **Critique of Judgment**. Berlin: Lagarde.

Keith-Spiegel, P. (1972). Early conceptions of humor: Varieties and issues. In J.H. Goldstein & P.E.

McGhee (Eds.), **The psychology of humor** (pp. 3-39). New York: Academic.

Klein, A. (1989). **The healing power of humor**. Los Angeles: Jeremy P. Tarcher, Inc.

Kemeny, M. (1984). **Psychological and immunological predictions of recurrence in herpes simplex II**. Paper presented at the annual meeting of the American Psychological Association, Toronto.

Lane, W. (1993). Strategies for incorporating humor into the school climate. **Schools in the Middle**. Summer.

Leone, R.E. (1986). Life after laughter: One perspective. **Elementary School Guidance & Counseling**, 139-142.

Lefcourt, H.M., Davidson-Katz, K, & Kuenenman, K. (1990). Humor and immune system functioning. **Humor: International Journal of Humor Research**, 3, 305-321.

Morreall, J. (1991). Humor and work. **Humor: International Journal of Humor Research**, 4 (3/4), 359-373.

McComas, H.C. (1923). The origin of laughter. **Psychological Review**, 30, 45-55.

McGhee, P.E. (1991). **The laughter remedy: Health, healing, and the amuse system**. Montclair, NJ: The Laughter Remedy.

Mindess, H. (1971). **Laughter and liberation**. Los Angeles: Nash.

Mindess, H. (1977). The use and abuse of humor in psychotherapy. In A. J. Chapman and H.C. Foot (Eds.), **It's a funny thing, humour**. New York: Pergamon Press.

Paydel, E.S. (1978). Contribution of life events to causation of psychiatric illness. **Psychological Medicine**, 8, 245-254.

Renzulli, J.S., Smith, L.H., White, A.J., Callahan, C.M., & Hartman, R.L. (1976). **Scales for rating behavioral characteristics of superior students**. Mansfield Center, CT: Creative Learning Press.

Schachter, S., & Wheeler, L. (1962). Epinephrine, chlorpromazine, and amusement. **Journal of Abnormal and Social Psychology**, 65 (2), 121-128.

Silverman, L. (1989). The highly gifted. In J.F. Feldhusen, J. Van Tassel-Baska, & K. Seeley (Eds.), **Excellence in educating the gifted** (pp. 1-84). Denver: Love Publishing,.

Spencer, H. (1860). The physiology of laughter. **Macmillan's Magazine**, 1, 395-402.

Stone, A.A. (1987). Evidence that secretory IgA is associated with daily mood. **Journal of Personality and Social Psychology**, 52, 988-993.

Torrance, E.P. (1974). Differences are not deficits. **Teachers College Record**, 75, 471-487.

Torrance, E.P. (1977). **Discovery and nurturance of giftedness in the culturally different**. Reston, Virginia: The Council for Exceptional Children.

Tuttle, F.B., Jr., Becker, L.A., & Sousa, J.A (Eds.). (1988). Characteristics and identification of gifted and talented students (3rd ed.). Washington, DC: National Education Association.

Van Tassel-Baska, J. (1989). A comprehensive model of gifted program development. In J.F. Feldhusen, J. VanTassel-Baska, & K. Seeley (Eds.), **Excellence in educating the gifted** (pp. 123-142). Denver: Love Publishing

Webb, J.T., Meckstroth, E.A., & Tolan, S.S. (1989). **Guiding the gifted child**. Columbus, Ohio: Ohio Publishing Company.

Ziv, A. (1981). The self-concept of adolescent humorists. **Journal of Adolescence**, 4, 187-197.

Ziv, A. (1984). **Personality and sense of humor**. New York: Springer.

Ziv, A., & Gadish, O. (1990). Humor and giftedness. **Journal for the Education of the Gifted**, 13 (4), 332-345.

Humor is by far the most significant activity of the human brain. *Edward De Bono, 1933- (psychologist, writer, lecturer on skills of thinking).*

Humor [is] something that thrives between man's aspirations and his limitations. There is more logic in humor than in anything else. Because, you see, humor is truth. *Victor Borge, 1909- (pianist, humorist). From* ***London Times****, January 3, 1984.*

BEST COPY AVAILABLE

EXTRAORDINARY EDUCATION FOR POSITIVELY EXTRAORDINARY PERSONS

BY VIRGIL S. WARD, Ph. D., EMERITUS PROFESSOR OF EDUCATION, UNIVERSITY OF VIRGINIA

The Twentieth Century in Differential Education for the Gifted. As one who has fought in the trenches of Differential Education for the Gifted since the early *1950s* (Doctoral Dissertation: **Principles of Education for Intellectually Superior Individuals**, University of North Carolina, *1952),* I have witnessed a number of significant changes in Perspective, Theoretic Orientation and Social Understanding of and about this important field of Research, Development and Dissemination.

And as I call to mind briefly at this sitting, my personal experience comprises a virtual catalogue of principle figures, selective regrettably but of necessity, in this inordinately important field of social and educational thought. I appreciate and admire all of them; most in the past half century, I have been privileged to know in person, to my own decided advantage. Instances in point, with apologies that other deserving individuals could not be included as well: (1) **George Betts**, Colorado: Autonomous Thinking; (2) **W. Ragan Callaway**: Alaska: Infant Reading; Nature-Nurture Controversy; (3) **Barbara Clark**, California: Integrative Education, Jungian Thought; (4) **James Gallagher**, North Carolina: Giftedness in the Special Education Tradition of Samuel Kirk, Illinois; (5) **Howard Gardner**, Harvard University: Theory of Multiple Intelligences; (6) **Bruce Shore**, McGill University, Montreal, Canada: Past-President, Canadian Association for the Gifted; Head, Research Group, and Publication, **Recommended Practices in Gifted Education: A Critical Analysis** (1991); and (7) **Abraham Tannenbaum** (with deceased **A. Harry Passow**), Teachers College, Columbia University: Author of **Gifted Children**, 1983. Continuing work under the aura of Leta S. Hollingworth including the original "Enrichment Matrix for Programs," " A Bill of Rights for the Gifted," etc.

Establishing the Foundations. These few -- among a decidedly small number of other productive individuals -- have made positive, and constructive contributions to the "extraordinary education of positively extraordinary persons." Their work has been substantially along the lines of those around the turn of this Century through which the field was originated, i.e., (a) **The Genetic Studies of Genius** --launched in the early decades of the Century by Lewis Madison Terman of Stanford University (scientist); and those of (b) Leta Stetter Hollingworth, Teachers College, Columbia University, and the Speyer School (public) of New York City.

Others -- by far the majority, I fear -- have been dangerously unaware of the significance of theoretical foundations, and even hostile toward the thought, a condition forewarned against since the earliest days of the Twentieth Century by eminent scholars, including both the American Philosopher, John Dewey (**Democracy and Education**, 1916), and the Britisher, Alfred North Whitehead (**Aims of Education**, 1928). They say variously, and each in his own way: Theory is eminently the most Practical of all things in Education.

Disintegration. Included among these counterproductive forces are certain doctrinaire ideologues whose superficial work, however earnest and however popular and numerous their following, must indeed -- and this with compelling argument and evidence -- be labeled as subversive in impact and have dangerous consequences! Among these disintegrative contemporary forces, several front runners in a field so numerous as virtually to defy all but illustrative mention, come readily to mind, thus: (1) A substantial host of insubstantial conference papers and non-refereed publications in fly-by-night, and sometimes privately owned or organizationally controlled, printing presses; (2) The somewhat massive bodies of new terminology spawned forth impulsively over a quarter-of-a-century, by Sidney J. Parnes in the Creative Education Foundation begun in 1953 by Alex Osborn; and his several cut-from-the-same "brainstorming"-cloth. Associates Donald Treffinger and others, under the banner of Creative Problem Solving -- as if significant problems could be solved save by any other than a creative process; (3) The Curriculum Enrichment movement emanating originally at the determined hand of Joseph S. Renzulli at the University of Connecticut, through his internationally-famed "Confratutes," and "Teaching the Talented" programs held each summer for the past twenty-seven years or thereabouts, for his "family" of students (undergraduate, graduate and special). This movement may well be the most widespread and influential of all the contemporary initiatives in the "gifted and talented education" field (Javits grants and Naeg foundation funding support); and finally (4) The expedient and locally popular activities along the Renzulli lines, of the current gifted program at the Curry School of Education, University of Virginia -- working initially from the advantageous base of the theoretic work of Virgil Ward -- who developed the program, "Differential Education for the Gifted at the University of Virginia," and brought it single-handedly into national prominence for 18 years (1956-72).

An earlier summary depiction of thought, cast in a positive vein over and beyond this disintegrative and degenerative, de facto condition, is found in a brief research paper under the Co-authorship of Virgil Ward and Maurice Fisher, entitled: **Manifesto 1994: Differential Education for the Gifted**. The second paragraph of this brief but pointed essay reads as

follows:

"We hold the belief that positively extraordinary education for positively exceptional individuals (children, youth and adults), which we conceive as Differential Education for the Gifted (DEG), is intellectually defensible, socially advantageous and professionally obligatory within the precepts of a democratic form of government. Yet we are led by understanding and reason to the observation that in the current state of affairs, gifted persons across the Nation, save in scattered islands of excellence, suffer egregiously from neglect, indifference, disbelief and even hostility in the American school. This situation occurs elsewhere in the contemporary world where democratic precepts and practices have not as yet taken sufficient hold in communities and in educational institutions."

The Road Back and a Cautiously Optimistic Note. Some years back (1980), I constructed a heuristic (explanatory) paradigm entitled: The Philosophic Analysis of Differential Education for the Gifted in which Five Problems of DEG were specified: (1) Policy, (2) Child/Student, (3) Curriculum, (4) Educator, and (5) Program, and set forth in a horizontal column. These problem areas were paired laterally with three Philosophic Modalities, i.e., (the) A. Axiological (value), B. the Logical, and C. Epistemological, with selected concepts in each of the resulting 15 "cells" being recognized problems and issues from the entirety of those identifiable from the literature at hand - thus:

Problems of DEG	A. Axiological	B. Logical	C. Epistemo-logical
1. Policy	Obligation and Initiative		
2. Child/Student		Definition and Topology	
3. Curriculum	General and Differential Objective	Definition and Topology	Process and Design
4. Educator		Teacher in Person and Role	
5. Program	Scope and Resource Allocation		

Now it is with this heuristic matrix, my most promising way of resolving deconstructive, couterproductive ideologies, and restoring intergrity (wholeness) to this (again) inordinately significant social and educational field of inquiry and observation. Once again may the concept and practice of "extraordinary education for positively exceptional persons" stand as it did on the tall shoulders of the pioneers who established it during the early years of this century.

Even with cautious optimism, who can be certain that things will once again be as they should be? Indeed, as the Romans would have it: ***Quo Vadis?*** And this, of course, can but remain to be seen! ✪✪✪✪

Continued from p. 1

The second article, written by Dr. Dan Holt of MacMurray College, discusses the role of humor in the education of gifted children. As Mark Twain (1835-1910) said, "The human race has one really effective weapon, and that is laughter." He is co-author with his wife, Dr. Colleen Willard-Holt, of **Applying Multiple Intelligences to Gifted Education: I'm Not Just an IQ Score!** (GEP, 1998). Colleen, Dan and I recently made a presentation on using MI theory in the gifted field at the April 1999 Conference of the Pennsylvania Association for Gifted Education (PAGE). The audience (primarily teachers and program coordinators) was very interested in applying our ideas and recommendations for using MI theory in their classrooms. The third article by Virgil S. Ward, Professor Emeritus at the

University of Virginia, discusses his assessment of the progress and current state of the gifted education field, primarily at the university level. Since ***GEPQ*** is a journal of open discussion and debate, we welcome Ward's analysis and any subsequent comments and rebuttals. His pioneering work on differential education for the gifted should be carefully studied by all individuals interested in presenting a challenging curriculum to the gifted. Dr. Michael Walters completes this issue with an essay on historical fiction related to the war in the Balkans and the tragedy in Littleton.

In discussing the current state of gifted education in Pennsylvania with my friend and colleague, Jim LoGiudice, he stated that programs for the gifted are again under attack by the Governor and his allies in this state's legislature. Jim and his colleagues in PAGE are waging an intense educational and political battle to maintain funding for gifted programs as well as a unique identity for these programs at the state and local levels. Please contact him at the Bucks County IU if you would like to provide support or to obtain further information.

Maurice D. Fisher, Publisher

WHY GIFTED STUDENTS SHOULD READ HISTORICAL FICTION: TWO CURRENT LESSONS

BY MICHAEL E. WALTERS CENTER FOR THE STUDY OF THE HUMANITIES IN THE SCHOOLS

There is a need to recruit leaders from the ranks of the gifted, since the concept of leadership is not purely a matter of politics. It includes intellectual leadership as well as the clever manipulation of and appeal to voters. All great leaders of the United States (Washington, Jefferson, Lincoln, Wilson, and Franklin Delano Roosevelt) had the capacity for both intellectual and political leadership, and the ability to attract individuals with intelligence and insight to advise them. Recently, there have been two events that demand intellectual as well as political leadership. These events are the NATO involvement in Yugoslavia and the catastrophic violence in Littleton, Colorado. I discovered two works of fiction that can help gifted students and their teachers understand these problems.

The first is **Montenegro** (Berkley Publishing Group, 1998) by Starling Lawrence, Editor-In-Chief at W.W. Norton & Co., who wrote this book as a result of his participation in the famous writers' retreat, Yaddo, in Saratoga, New York. It is about a British confidential (secret) agent who is sent to the Balkan region currently involved in warfare. The time is 1908 and the British agent, who is disguised as a botanist, is trying to detect military installations constructed by the Austrians. The conditions that he discovers eventually cause World War I. Ironically, although the time and place are ninety years ago, the attitudes and ethnic conflicts are the same as today. This novel emphasizes Serbian culture -- the author describes the mentality of the Serbs, which is that of religious nationalism, and they perceive their history as one of religious martyrdom. These feelings were intensified by their tragic experience in World War II when the Serbs not only fought the Nazis but their Croatian and Muslim collaborators in a brutal struggle. The Serbs are Slavs and members of the Eastern Orthodox Christian religion. They perceive their suffering and the massacres of World War II as part of a historical drama going back six centuries. In 1380 the Ottoman Turks defeated the Serbs in a bloody battle in Kosovo where their national shrine, the Church of Saint Slava, is located. Therefore, for the Serbs, what they are now doing is not ethnic cleansing but a religious act linked to their national history and consciousness. This is not written to defend the recent acts of the Serbs but to understand the roots of the conflict and the Serbian national psyche. By having this comprehension of the historical background for the conflict, one can become more aware of how to deal with the Serbs' response to the NATO bombing campaign. The reason that bombing will not demoralize them is because it only reinforces their sense of religious martyrdom. It is noteworthy that the Serbs, despite their genocidal behavior toward the Kosovar Albanians, perceive themselves as victims and constantly use anti-Nazi slogans. Lawrence's novel indicates why historical fiction can help the gifted to understand current world events.

The second story is a novella by Stephen King, ***Apt Pupil*** (from **Different Seasons**, Signet, 1983), which gives insight into the subcultures that fester inside many teenagers. It is about how a gifted student becomes enthralled with the Holocaust, and eventually becomes a disciple of the poison that caused that tragic event. This poison is not just racial hatred but a fascination with evil. The student discovers that one of his neighbors was a Nazi war criminal. He forces this individual to share the secrets involving the slaughter of Jews in the Holocaust. The Nazi war criminal then becomes a tutor of hate and evil. When this evil tutor has a heart attack, his fellow patient in the intensive care unit (a Jewish victim of his brutality) notifies an Israeli war crimes unit that comes to arrest the war criminal. The book ends with the sad understanding that this young man has become part of the next generation of Nazis. In the recent Colorado shooting, one of the culprits was an admirer of Hitler, although he would have been a victim of the Holocaust because of his mother's ethnicity. Stephen King wrote this novella almost sixteen years ago. He understood that evil can be seductive. King's story can help gifted students understand the cultural dynamics that produced the bloody violence in Colorado. ". . .that somebody had really done those things, that somebody had let them do those things, and his head began to ache with a mixture of revulsion and excitement. . . ." Stephen King, ***Apt Pupil***, p. 120. * * * *

GIFTED EDUCATION PRESS QUARTERLY

10201 YUMA COURT
P.O. BOX 1586
MANASSAS, VA 20108
703-369-5017

FALL 1999
VOLUME THIRTEEN, NUMBER FOUR

LIFETIME SUBSCRIPTION: $22.00

www.cais.com/gep

MEMBERS OF NATIONAL ADVISORY PANEL

Dr. James Delisle – Professor and Co-Director of *SENG*, Kent State University, Kent, Ohio

Dr. Jerry Flack - Professor, University of Colorado, Colorado Springs

Dr. Howard Gardner – Professor, Graduate School of Education, Harvard University, Cambridge, Massachusetts

Ms. Diane D. Grybek - Supervisor of Secondary Gifted Programs (Retired), Hillsborough County Schools, Tampa, Florida

Ms. Dorothy Knopper - Publisher, Open Space Communications, Boulder, Colorado

Mr. James LoGiudice - Director, Program and Staff Development, Bucks County, Pennsylvania IU No. 22 and Past President of the Pennsylvania Association for Gifted Education

Dr. Mary Meeker – President of SOI Systems, Vida, Oregon

Dr. Adrienne O'Neill – Timken Regional Campus, Canton, Ohio

Dr. Stephen Schroeder-Davis – Coordinator of Gifted Programs, Elk River, Minnesota Schools and, Past President of the Minnesota Council for the Gifted and Talented

Dr. Bruce Shore – Professor and Director, Giftedness Centre, McGill University, Montreal

Ms. Joan Smutny - Professor and Director, Center for Gifted, National-Louis University, Evanston, Illinois

Dr. Virgil S. Ward – Emeritus Professor of Gifted Education, University of Virginia, Charlottesville, Virginia

Ms. Susan Winebrenner - Consultant, Brooklyn, Michigan

Dr. Ellen Winner – Professor of Psychology, Boston College

Recently, the results for the second year of Virginia's high stakes testing program were released to school districts and the public. This program, known as the Standards of Learning or SOL (tests administered to students in every public school in grades 3, 5, 8 and 9-12), has generated controversy throughout the commonwealth regarding its purpose and validity. Low performance has occurred in English, history and social studies, mathematics and science in every region of Virginia from the inner cities of Norfolk, Portsmouth, and Richmond to the high-tech, well-educated communities of Northern Virginia. Educators, politicians and concerned citizens have become polarized in their opinions about the value of these tests, and many teachers argue (supported by principals and superintendents) that they have to teach disjointed facts with little emphasis on reasoning, judgement and problem solving. On the other hand, conservative politicians say the SOL causes schools to emphasize important areas of knowledge and enforces strict academic criteria for school accreditation. In addition, measurement experts in Virginia observe that the SOL tests have low correlations with norm-referenced tests and poor psychometric standards for determining passing scores. Our primary concern with Virginia's SOL tests (and similar high stakes examinations used or being developed in other states such as Kentucky, Massachusetts and Pennsylvania) is with their impact on the design and implementation of gifted programs. What benefits do these tests have for advanced students beyond fulfilling the passing criterion of 70% correct (in Virginia)? Will they force teachers to emphasize the learning of numerous disconnected facts to the detriment of a curriculum that stresses reasoning, problem solving, and judgement? Will teachers be forced to de-emphasize or abandon differentiated programs that stress reasoning, imagination and innovation? The controversy regarding SOL testing in Virginia and elsewhere must stir educators of the gifted to develop a powerful differentiated curriculum (derived from a strong rationale) that goes beyond the basics of responding to cut-and-dried multiple-choice items. For who else is more capable of leading public education out of the present stifling atmosphere created by this poorly designed and politically-charged testing program?

In early August, I heard Dr. Vinton G. Cerf speak. As the "Father of the Internet," he co-designed this communication system for the Department of Defense in the 1970's and 1980's, and is currently Senior Vice President for Internet Architecture and Technology at MCI WorldCom. In December 1997, he and his partner, Dr. Robert E. Kahn, received the U.S. Medal of Technology for starting and developing the Internet.

Continued at the top of p. 2 —

Dr. Cerf, a graduate of Stanford University and UCLA in mathematics and computer science, invented and implemented the concept of transmitting electronic messages as packets of information similar to how a post card is delivered through the mail. A particularly interesting part of his speech involved the future of the World Wide Web. As he emphasized, the Web has only been operating for general and commercial users during the last five years; therefore, it is too early to predict its future direction and composition. But he did indicate that the WWW would become more and more important in helping citizens to manage their households and basic appliances. He also said that the first manned flights to Mars would include communications via the interplanetary Internet. (He had just completed an agreement with NASA to design the special transmission features necessary for communicating from one planet to another via the Internet). When one contrasts the wallowing and depressing debates over SOL testing with the work currently being conducted by scientists such as Dr. Cerf, it seems as if these activities are occurring on two different planets. The SOL planet is like a bleak, unstimulating landscape involving drudgery beyond compare, while Dr. Cerf's planet is one of hope, innovation and great educational potential. Which one would you rather live on? I know where I'm headed!

Dr. Mikhail Pekker, a nuclear physicist at the University of Texas, has written an insightful article about educating students in mathematics and the sciences. Here are Dr. Pekker's observations based on his experiences in America after immigrating from Russia in 1991. The implications of his observations are relevant to providing a rigorous curriculum to all students who are gifted in these areas of learning and understanding. With her permission, we are privileged to include three poems from Dr. Rita Dove's latest book of poetry, **On the Bus with Rosa Parks** (1999, W.W. Norton & Co.). She is a former Poet Laureate of the United States (1993-95) and is presently Commonwealth Professor of English at the University of Virginia in Charlottesville. Her poems are noted for their insights into the problems of our age. The selections included in this issue of ***GEPQ*** have particular bearing on helping children to achieve their fullest potential in a joyful and stimulating learning environment. I have also included book reviews in this issue from ***Gifted Education News-Page***. Finally, Dr. Michael Walters discusses one of the greatest poets and writers of any time -- Johann Wolfgang von Goethe. May you have a successful 1998-99 school year with much happiness in the new century/millennium. See you again in the year 2,000!

The American Education System: A Look From the Inside

By Mikhail Pekker, Ph.D.

The University of Texas Austin, Texas

In its Winter 1997 issue, The California Science Teachers Association Journal (CSTA Journal) published my article, "The American Education System: A Look From the Outside." When I wrote this article, I was not directly involved in public education in the United States. The current article is based on my direct involvement as a parent of two children.

Seven years ago my family immigrated to the USA from Russia. During these seven years my son graduated from middle and high school, and my daughter completed elementary and middle school. Now, my son is a freshman at Rice University in Houston, Texas, and my daughter is a sophomore at Round Rock High School in Round Rock, Texas.

Having looked at the education of my children and compared it with my own education, I see clearly that the main problem of American education is not that high school students do not have a real interest in math, physics, or chemistry. Instead, they lack intellectual support from the parents' side and from the American educational system itself. I saw with my own eyes how difficult it is to introduce any element of intellectuality in the process of learning in American schools. Let us start with elementary and middle schools.

On the day following our arrival in America, my ten-year-old son and eight-year-old daughter went to one of the best private schools in St. Paul and Minneapolis, Minnesota, the Talmud Torah of St. Paul. The Jewish community of St.

Paul paid for the education of my children. By that time, Dina Migachyov, a Russian immigrant and a math teacher, had been teaching at the Talmud Torah for two years. And as I understood it later, it was very good fortune for us. Why? Because Dina Migachyov was not afraid to bring a spirit of creative competition into her math lessons, encourage advanced studies and require lots of homework. If for my son and me there was nothing surprising in this approach, then for American parents the "Russian approach" to teaching mathematics constantly caused uneasiness. They time and again came to the principal of the school with complaints about Dina: "Instead of watching TV, playing baseball, or riding bicycles, our children have to spend one or even two hours doing math homework!" Nevertheless, the Talmud Torah administration was always on Dina's side. Why? Because graduating students of this elementary school successfully passed mathematics exams and entered St. Paul Academy and Summit School, one of the most prestigious middle-high schools in Minnesota, and many of them received full or partial scholarships as the most gifted children in their class.

From my point of view, and Dina Migachyov agreed with me, she taught math at the level of an ordinary Russian school. It was after our departure to Texas, where I found a job at the University of Texas at Austin in 1993, that Dina got recognition among American parents; they wanted their children to be taught only by the Russian teacher. However, ask any Russian, Chinese, Hindu or Vietnamese living in the United States and they will most likely tell you that the level of American elementary and middle schools is simply awful, and significantly lower than in their native countries.

In 1998 I was invited to lead the math club in one private school in Austin. I was shocked when some of the 8th-grade students studying algebra-1 had problems with addition and multiplication of fractions. Recently my friend asked me to help the daughter of their friend. The same problem occurred -- the smart girl in 6th grade is studying pre-algebra but does not know how to divide one fraction by another. Among my friends, nobody except those whose children attend elementary and middle school believe that this is possible. So, Talmud Torah's support of Dina was really an exception, not the rule.

My son successfully passed math exams (there was no surprise here) and entered a middle school with a very strong magnet program. Though the level of teaching math and science at this middle school was much higher than at ordinary American schools, it was still lower than the level in the math and physics schools in the former Soviet Union. In fact, the level of the magnet program corresponds to the average level of a good Russian school.

In 1995, we moved to Round Rock, Texas, and my son skipped eighth grade and started ninth grade at the local high school. At this school, there was a very creative biology teacher, Mrs. Debra Furman. She organized a special class, "Independent Study," where students could perform individual projects. For those who were really interested in biology and chemistry, she helped to establish contacts with University of Texas laboratories, where students could perform their projects under the supervision of UT professors and graduate students. During almost ten years, the students at this high school successfully participated in regional, state and international science fairs. My son, being a student at the school, won regional competitions three times, took second place at the Texas State Fair in the engineering category, and participated twice in the International Science Fair. At the 1998 Science Fair his team project won third place and his individual project got a special prize for the best use of the computer. He also successfully participated in other competitions. Unfortunately, in 1997 Mrs. Furman left the school and the "Independent Study" class ceased to exist in 1998.

After Mrs. Furman left the school, the high school lost its image of being an advanced and creative school and became an ordinary school with ordinary problems -- discipline and drugs. If a football coach or a choir or band conductor had left the school, the administration would have made all possible efforts to find an adequate substitute, because each school has to have a good football team, a choir and a band to maintain the school image, but not the success of students in natural sciences, history, and literature. In contrast to the Russian system, the American system of education is not oriented to support talented teaches. Everything a talented teacher does is his or her own business; the school does not seem to participate in this process. The main goal, as was explained to me many times, is not to give students solid knowledge but to raise good citizens. And that is true. Of course each American school has a rating, but it does not affect teachers' salaries and school funding.

In 1996, after my son represented Texas at the International Science Fair, I decided to set up a science club in his school similar to one I attended at his age in the former Soviet

Union. I came to the principal, and explained my ideas to him. I wanted to train teams in physics and math to compete at national or international levels. The principal accepted this idea with enthusiasm and asked the science department to make an announcement about the new club. How many students do you think joined the club? Two out of 4000! All science teachers and the principal were shocked and upset; they expected no fewer than 25 students to come. The principal then offered to organize a science club for adults and students at Round Rock Community College, assuming that it would give me more opportunity to realize my goal. An announcement was made in the Round Rock newspaper. The titles of my suggested courses were "Physics is Fun" for children, and "Physics without Tears, Science without Fears" for adults. The response was even more pitiful – nobody showed up. At the end of 1998, I sent letters, expounding my ideas, to ten members of the Texas Legislature, including the chairman of the education committee. Only one legislator invited me to discuss my letter. Unfortunately our meeting never occurred. To distribute money appears to be much easier than to be involved in practical activities such as the development of the educational system.

Maybe there is nothing wrong with the fact that most American children are not interested in science and that most of all they want to have fun. America is a prosperous country with strong democratic traditions. Probably, I cannot with only two years of citizenship reach the correct conclusions about American education. Nevertheless, let us look further at this problem.

Below is a table showing the number and percent of students by ethnicity who graduated from The University of Texas at Austin with Master's and Doctoral degrees:

Black, White and Native American Students				Asian and Hispanic Students			Foreign Students			Percentage of Foreign Students		
Year of graduation	94-95	96-97	97-98	94-95	96-97	97-98	94-95	96-97	97-98	94-95	96-97	97-98
Business	572	568	591	79	119	118	99	108	137	13.2%	13.6%	16.2%
Law	432	441	400	76	98	94	4	24	13	0.8%	4.3%	2.6%
Engineering	241	159	300	27	47	71	175	243	274	39.5%	54.1%	42.5%
Natural Science	75	165	175	11	29	26	74	110	128	46.3%	36.2%	38.9%

Unfortunately, I don't have information on the numbers of students from the first two groups who are first-generation immigrants. However, I believe they comprise about one third of the students who graduated from the engineering and natural science departments. As you can see, the number of foreign students graduating from the University of Texas at Austin with advanced degrees increases from year to year, and they make up approximately 43% of all graduating students in engineering and natural science departments. This is statistics. But what is the reality of life?

In 1995, I took a course in advanced computer graphics in the Computer Science department. I was surprised that out of 35 students two were from Russia, five or six were Americans over 30, and the others were probably from Taiwan because they spoke Chinese among themselves. That takes place at The University of Texas, which holds tenth place on the honor list of science and engineering in the United States. Let us look at MIT, Harvard and Caltech. Who studies physics, chemistry, biology, engineering? The greatest portion consists of foreign students and children of first-generation immigrants. Maybe it is not so bad! Maybe American universities produce

engineers, scientists for the whole world, for countries of Europe, Asia, South and Central America, or maybe for Russia or China. But ask yourself who works in American science and high-tech companies?

In a high-tech company where my brother worked, Russian engineers and scientists pushed out the American engineering and scientific staff. My friends who work in high-tech companies say there are companies that are almost completely filled by Hindus, Chinese and Koreans. It means that people from other countries, foreign students who have graduated from American universities, or engineers and scientists who have received their education in their native countries obtain jobs in American high-tech companies and push out Americans. Now is the time to face the truth. The American education system produces potential losers in the field of natural science and engineering -- the important areas of global economy.

Maybe the problem among American children is only concerned with science and math. But who are the best high school students in most subjects? They are primarily students from China, Indonesia, Japan, Korea, and Russia. Why? Because they are very motivated to get a good education, to be the best that they can be, to be ahead of others. Who has to take responsibility for our children's motivation? We, the parents! I give you one example.

Irene Bersuker teaches my daughter Irina to play piano. She is a very talented teacher who desires to teach her students not only to play piano, but to love music, to enjoy music, to feel the soul of music. I am very happy that my daughter has such a talented teacher. Every year, music students have the opportunity to participate in three to four musical competitions. My daughter has participated in such competitions for two years. What surprised me about these competitions is the low number of Americans who participate. In the last competition, among twenty participants, fourteen were from China and Southeast Asia, two from Russia and the other four were Americans. Are American children as gifted and talented in music as the Chinese or Russians? Of course they are! Irene Bersuker told me that she had three very gifted American students; they played beautifully, but their parents refused to let their children participate in the competitions because they thought it would put too much pressure on the children. Yes, competition is stressful. At first, my daughter could not sleep before the competition, and she had a headache and a stomachache the day of competition. But over time, she learned to compose herself to overcome her nerves and to compete.

Who was the typical American at the beginning and in the middle of our century? He was an aggressive person, who wanted to be the best, who wanted to be a winner. Now the average American wants mainly to have fun. It is very, very sad. I see children whose fathers and grandfathers created this great prosperous country, which welcomed my family as well as families of thousands of new immigrants. Why do American children have to lose in competing against children of new immigrants for admission to the best universities of America? Why don't they want and cannot get an education that allows them to successfully compete with foreign engineers and scientists? Clearly, something is seriously wrong with the American educational system.

What Steps Should be Taken to Improve the American Education System?

We should begin, of course, with improving the education of the gifted-creative child -- not just the encyclopedist who wins *Jeopardy* -- but with all gifted-creative children and their personal teachers. I remember that as soon as Olga Korbut had performed in America, a gymnastics boom began so that hundreds or thousands of gymnastics clubs were formed. And what was the result? In ten years, the American gymnastics team has become one of the best in the world. Who knew much about the game of soccer in America fifteen years ago? Almost nobody. But now soccer is one of the most popular games. The American women's soccer and gymnastics teams won first places at the 1996 Olympiad. Thus, the **first objective** should be to obtain more publicity for educating gifted-creative children by using similar publicity techniques from sports!

Second, we should create a national competitive school program for the natural sciences, similar to the Russian system or to competitive sports in the USA. The test-system in American schools is similar to a float; it is always adjusted to the average level of students' knowledge. This system is not competitive by nature, in contrast to the Russian Science Olympiad. All of the science teachers with whom I spoke agreed with that. The creative abilities in Russian schools are estimated not by the number of average problems that the student solves during a one hour test, but by solving only three to five problems during three to four hours of the school, district, city or republic olympiad. These problems require original thinking and a creative

unconventional approach rather than mere knowledge of formulas and a fast mind.

Children in American schools are deprived of this type of competition, which is a crucial element of intellectual development. They are deprived of the joy of seeing the admiration in the eyes of their schoolmates, to feel their support and love. Students may win or lose a basketball game, and they see how poorly or how well their friends play basketball; they compare themselves with each other, and learn from each other. This competition teaches them to share a victory or a loss. Why can't competition work the same way for school studies?

One response might be that no matter how high or low the student's grades and intellectual abilities, first of all, he has to feel good in school. The school must not make the student feel stigmatized on the grounds of poor performance. This is precisely why in American schools, students do not usually know their classmates' grades. Students do not know if they are ahead of or behind their classmates. And this is undoubtedly correct.

However, without competition, without comparing knowledge and abilities to schoolmates, students are deprived of the opportunity to understand what they are actually worth. Moreover, they are deprived of the true motivation for study and creative activity. In addition, the lack of competition in education is always an advantage for mediocre teachers because it makes their positions invulnerable.

How can we incorporate competition in the schools? The competitive system should be similar to the Russian School Olympiads and be completely separated from the school system. Who, then, should take responsibility for organizing and conducting Olympiads? Of course, the best American universities and high-tech companies such Dell, IBM, Motorola, and Microsoft should be responsible for these competitions. On the one hand, such competitions would allow us to overcome the gap between high school and university education. On the other hand, they would create a good opportunity for universities and high-tech companies to advertise themselves and to publicize their work in science and engineering. I am sure that the most creative graduate students and young teachers, similar to their Russian colleagues, would participate in organizing and conducting physical, chemical and math Olympiads.

A competitive system that exists independently from the public schools would preserve the best features of American schools: democracy, respect toward students, their individuality, and at the same time it would provide the dynamics without which such a system would be impossible.

A new multi-level system for School Science Olympiads would enable gifted children to demonstrate their abilities without regard to whether the quality of education in their school is bad or good. Also, this system would help determine the actual quality of different schools, textbooks, and teachers. Still, the most important result of this system is that it would produce a broad network of school and non-school scientific clubs and societies. This network would support and advance the intellectual development of our children; thus, it would form the infrastructure for American intellectual culture.

I don't want to be misunderstood: intellectual competition is not really a type of sport, where the champion is revealed to be the most talented, the most gifted child, or a genius. The most important thing in sports is victory -- to throw further, to run faster, to jump higher -- to take the lead. Intellectual competition is impossible without sharing victory with one's rivals -- to tell them how to solve a problem, to think up a beautiful experiment and work on it with collaborators. The motivational power of intellectual competition is always the desire to share victory with others, so that they too can achieve at the highest levels. In this competition, everyone can participate and win. Clearly, the desire to solve the problem first, and then to tell others how to solve it is the motivational power of real intellectual competition. Without this factor, intellectual competition makes no sense. Intellectuals are always longing to find each other because among similar, creatively active people, they find understanding and the possibility for self-expression. Intellectualism joins people in the spirit of creativity.

Sending a science teacher into space, organizing trips for science teachers to the South Pole or North Pole, and funding weeks of travel for teachers to Japan, Europe, and so on are simply expenditures of money; these activities accomplish nothing. Tax money has to be invested directly in the success of the student and teacher, in the creative son and daughter. Tax money must be invested in the creation of the intellectual infrastructure for our children. The **second objective** of my educational program is the creation of a national competitive system for natural science and mathematics, similar to the Russian system, a system in

which schools win, and students and their teachers become national celebrities.

I am sure that school administrators have to be put in situations where their school programs are appreciated not only for the success of students in sports and high levels of discipline, but also by the success of students in math, science, literature and history. Only this can compel school administrators to love and to support outstanding teachers and gifted students.

Two years ago, I asked one of the greatest physicists of our century what he thought about the American education system. He looked at me as if I were a little slow, and said: "What are you talking about? America does not have any system of education. It is an absolute mess!" Then, he added: "My grandchildren don't have any interest in science; they love soccer. Science is for immigrants just like you."

In 1996, while attending a science conference, I accidentally met with Steve Rodecker, the best American science teacher in 1995. (Steve helped me publish my Winter 1997 article in the CSTA Journal.) During our one and one-half hour conversation, Steve was very critical of American education. He told me that one of California's school districts was against setting up magnet programs in its schools because they would be violating the "equal opportunity"concept. Based on this type of misguided thinking, a **third objective** of American education should be to train administrators to: (1) place the highest possible value on academic achievement, and (2) design the type of mathematics and science program discussed in this essay.

From what grade do we have to implement a new approach to science education in American schools? My parenting experience and conversations with teachers convinced me that we have to start in upper elementary or middle school, in fifth or sixth grade. We know that with increasing age, human abilities to learn a foreign language decrease. Until approximately 12-14 years a foreign language is easily learned. After this age, a person would have to exert all his forces to learn a different language. Math, physics and chemistry are languages, scientific languages. Therefore, to delay the study of these subjects until the last three years of high school means to create barriers to these disciplines, to deprive most students of the possibility of possessing the language of abstract sciences, and to receive training in intellectual work -- both of which undoubtedly would be useful in their adult life. Most children who immigrate to the United States from Russia and Asian countries such as China, Korea, Japan and Vietnam have obtained their initial education in their native country, where the focus on math and science begins at an earlier age than in the United States. Therefore, it is not surprising that after one or two years in the United States, they become the best students in the public schools.

Teachers, parents and students will be drawn to this new system of education through publicity, a national competition system, and a new system for training and evaluating school administrators. Moreover, we can expect a new market for scientists and mathematicians to develop as a result of this change, thereby stimulating the economy. America will then convert from a country that imports "brains" to a country that shares and exports them. ♣ ♣

About the Author

Mikhail Pekker was born in Kiev, Ukraine in 1952. In 1969 he graduated from a special physical science-mathematical school. While at school, he participated in the Ukrainian Olympiads in physics. In 1969 he entered the Novosibirsk State University, Physical Department, which is one of the best universities in Russia. After graduation, he started to work in the Novosibirsk Institute of Nuclear Physics, a highly esteemed research facility in Russia. He received his Ph.D. in 1983. His family immigrated to America in 1991. Since 1993 he has worked as a researcher in the Institute for Fusion Studies at The University of Texas at Austin. His wife Tatyana works in the Space Research Center at the same University. His son David is a freshman at Rice University (Houston, Texas). He likes physics, engineering and math. His daughter Irina is a sophomore at Round Rock High School, Austin Texas. She enjoys playing piano, and cooking delicious dishes for her family.

Thought is great and swift and free, the light of the world, the chief glory of man. *Bertrand Russell, 1872-1970 (British philosopher).*

Thought is subversive and revolutionary, destructive and terrible; thought is merciless to privilege, established institutions, and comfortable habit. *Bertrand Russell, 1872-1970 (British philosopher).*

Poems by Rita Dove from Her Latest Book

From On The Bus With Rosa Parks (1999, W.W. Norton & Co., Inc.)
(Reprinted by permission of the author.)

The First Book

Open it.

Go ahead, it won't bite.
Well . . . maybe a little.

More a nip, like. A tingle.
It's pleasurable, really.

You see, it keeps on opening.
You may fall in.

Sure, it's hard to get started;
remember learning to use

knife and fork? Dig in:
You'll never reach bottom.

It's not like it's the end of the world—
just the world as you think

you know it.

For Sophie, Who'll Be in First Grade in the Year 2000

No bright toy
this world we've left you.
Even the wrapping
is torn, the ribbons
grease-flecked and askew.
Still, it's all we have.

Wait a moment before
you pick it up. Study
its scratches, how it
shines in places. Now
love what you touch,
and you will touch wisely.

May the world, in your hands,
brighten with use. May you
sleep in sweet breath and
rise always in wonder
to mountain and forest,
green gaze and silk cheek—

dear Sophie,
littlest phoenix.

Freedom: Bird's-Eye View

The sun flies over the madrigals,
outsmarting the magisterial
wits, sad ducks
who imagine they matter.
What a parade! Wind tucks
a Dixie cup up its
sleeve, absconds
with a kid's bright chatter
while above, hawks
wheel as the magistrates circle
below, clutching their hats.

I'm not buying. To watch
the tops of 10,000
heads floating by on sticks
and not care if one of them
sees me (though it
would be a kick!)
—now, that's
what I'd call
freedom,
and justice,
and ice cream for all.

Book Reviews from April-May 1999 Issue of *Gifted Education News-Page*

Days of Grace: A Memoir (1993, Ballantine Books) by Arthur Ashe and Arnold Rampersad – Following the premature death in 1993 of the world champion tennis player, Arthur Ashe, from AIDS (transmitted by a blood transfusion administered during heart surgery), his hometown supporters in Richmond, Virginia wanted to place his statue along this city's famous Monument Avenue -- a street lined with huge warlike statues of famous Confederate generals such as Robert E. Lee, J.E.B. Stuart and Stonewall Jackson. Of course, this location was strongly opposed by the old Confederate sympathizers who are still prominent as the last holdouts of the "Old South." Fortunately, their cause lost again because today one can view the serene likeness of Ashe prominently displayed along this long and wide street near the once segregated tennis courts where he learned the game and developed his world class skills. This book is about a man of high athletic and intellectual abilities whose final struggles with heart disease and AIDS made him an even greater hero than he attained through sports.

During his brilliant tennis career, he played on the U.S. Davis Cup team from 1963-70, 1975 and 1977-78. He was captain of this team from 1981-85. In 1975, he became the first black to win the Wimbledon singles and the World Championship singles. He received worldwide attention in 1970 when the government of South Africa banned him from playing in that country's open tournament because of his outspoken views on apartheid. During his final years, he was involved in setting up an AIDS education and support foundation -- the Arthur Ashe Foundation for the Defeat of AIDS.

Throughout the book, he demonstrates his humility and intellectual strength. When discussing his father's influence on his life and values, he said, ". . .it is crucial to me that people think of me as honest and principled. In turn, to ensure that they do, I must always act in an honest and principled fashion, no matter the cost." (p. 3). His sensibility to art reveals a man whose interests transcended winning the next tennis game: "Of the old masters, the work of Rembrandt moves me more than any other. At the Metropolitan Museum of Art, on Fifth Avenue in New York City, I have several times studied his celebrated *Aristotle Contemplating a Bust of Homer*. . .In other museums in other cities around the world, taking time off from the tennis tournaments that usually had brought me there, I used to seek out his quiet, brooding self-portraits, or his wonderful group paintings, or his more modest but accomplished etchings. . . ." (p. 39). Later in his discussion of Rembrandt, he says, ". . .But although his last years were unhappy, most critics agree that Rembrandt's art in this period was not only technically superior to that of his happier years but also much richer in spiritual and psychological insight. I wasn't surprised to read this judgment, because I have always been a firm believer in the therapeutic value of adversity. Of all people, athletes must reach an accommodation with losing, and learn to make the best of it." (p. 40). For the athletically and intellectually gifted student, there are few role models who are better than Arthur Ashe.

Sports in America (1976, Fawcett Crest) by James A. Michener -- During the fall of 1960, the author, a group of movie stars and a famous sports figure flew into eleven states to provide support for John F. Kennedy's presidential campaign. The powerful attraction that athletes have for American citizens was clearly demonstrated when the plane landed one dark and windy evening at a small Nebraska airport. After introducing various Hollywood celebrities and Ethel Kennedy to the crowd with little effect, "a low rumble rose from the crowd. . .and one man shouted, 'It's Stan the Man' [the baseball great, Stan Musial, of the St. Louis Cardinals]. And a great cry rose from the night, and Musial walked into the glare, a tall, straight man in his late thirties, an authentic American hero, and the men fell back to let him pass." (p. 300). Michener's book analyzes the reasons why Americans have such a passion for athletes in baseball, football, basketball and other major sports, and by doing so, he helps educators to understand what they must do to cause more interest and support for education programs for the gifted. Although this book was published over twenty years ago, it is still relevant today in providing information about the relationship between high athletic performance and high intellectual achievement. The thirteen chapters plus the epilogue provide a comprehensive assessment of the culture of sports in American society; these chapters discuss such current issues as the relationship between sports and health, children and sports, women and sports, the role of sports in higher education, the aging athlete, what happens to athletes after they retire from sports, and the impact of aggression and violence upon athletes and fans. Educators of the gifted should review Michener's analysis from the perspective of learning how to increase interest and funding for their programs by adapting some of the concepts and applications that have made sports in America so successful. Michener was both an avid fan of various sports and an athlete. His life demonstrated that great intellectual achievements can go hand in hand with a love for the sporting life.

The Joffrey Ballet: Robert Joffrey and the Making of an American Dance Company (1996, The University of Chicago Press) by Sasha Anawalt is about an individual who had an extraordinary ability to express his feelings and understanding of the world

through dance and choreography. Although the area of dance has been traditionally ignored by the public schools as a form of giftedness, the author shows that it involves a type of intelligence which is distinct from the areas measured on standardized tests of intelligence. Gardner's Multiple Intelligences theory (1983) would place dance in the area of Bodily-Kinesthetic intelligence. Bobby Joffrey (1928-88) demonstrated his extraordinary ability at a young age: "Bobby seemed unstoppable. Years later, when asked, 'How long have you wanted a ballet company?' Bobby responded, 'Since I was nine years old.' Everywhere he went, he danced. One afternoon in fifth grade at Summit Elementary, after weeks of rain, when the physical education teacher had run out of ideas for indoor sports activities, Bobby offered to teach them all how to polka. 'I taught the boys and girls and we polkaed around the room,' he said. 'I was always planning. In school I would do little plays and direct them and make people do things and decorate. . . .' " (From ***The Joffrey Ballet*** [1996, p. 26] by Sasha Anawalt). Dance was considered by his peers to be for "sissies." But Joffrey's parents, family and the performing arts community of Seattle, Washington, strongly supported his efforts to develop into a world class performer. After studying in Seattle and New York under some of the greatest dance teachers, he formed the Joffrey Ballet Company which became world renowned for its classical and modern dance interpretations. For all youth interested in a career in dance and their teachers, the author tells a fascinating story about how this type of intelligence can be nurtured and fulfilled. ✱✱✱✱✱

Understanding Our Present Century Through Reading the Works of Goethe

by Michael E. Walters Center for the Study of the Humanities in the Schools

This New Year's Eve will be a celebration of two milestones, the coming of a new millennium and century. It is more productive to access a century than a millennium. A millennium encompasses too much data to intellectually focus upon. However, a century can give us insight into our mistakes and achievements so that we can seek lessons for future behavior. This final year of the twentieth century is the 250th anniversary of the German poet, Johann Wolfgang von Goethe (1749-1832). Although he lived more than 150 years ago, his life and concerns are relevant to the problems of our century.

Among the major issues of this century, and especially the present, are those of totalitarianism, nationalism and fanaticism. Goethe's masterpiece was an epic poem called **Faust** (1797-1801). It is about how a frustrated scholar makes a pact with the devil in order to obtain unlimited power and success. A century after Goethe's death, there came to power in Germany a Faustian individual. This person was Adolph Hitler, who sought to be the Führer, the maximum leader to whom all citizens of the nation had to give blind allegiance. The movement that Hitler led, National Socialism (Nazism), was also Faustian. It attempted to dominate the world and create an empire based on racial attributes – the superiority of the so-called Aryan race. Goethe was able to capture this yearning of the individual to have complete success in politics and one's personal life. Totalitarian regimes are able through mass propaganda to make this yearning a collective desire. By studying **Faust**, gifted students can obtain insights into the major mania of the twentieth century – the glorification of the leader and the nation. It was not just Nazi Germany that has represented this phenomenon, but also communist Russia, Mao's cultural revolution in China, Pol Pot in Cambodian, Milosevic in Serbia, and the entire worldwide stew of political tyranny and mass murder. The struggle between Faust for his redemption and the devil (Mephistopheles) is a metaphor for this struggle.

Goethe's **Faust** can be contrasted for gifted students with works by two twentieth-century German writers: Erich Fromm's **The Art of Loving** (1956) and Martin Buber's **I and Thou** (1923). Both Fromm and Buber lived through the horrendous period of Nazi Germany (1933-45). One of Faust's chief yearnings is the power to seduce women. However, he learns that love must not be a game for personal manipulation. What Faust originally sought was a reflection of his own self, egotistical pleasure and power over another human being. Fromm in **The Art of Loving** describes how love must be mutual and grounded in the development of one's personality. It is a process of self-growth, not a mere power game. Buber in **I and Thou** sees a dual universal interaction between the I-It where one uses other people as objects. In contrast, the I-Thou is built upon dialogues between individuals. For Buber and Fromm, love is expressed in one's relationship with other human beings, nature, animals and art.

Goethe also represents another difficulty for individuals in the twentieth century – how to be a participant in one's own culture and be universal (multi-cultural) in one's outlook. He was self-consciously German and European. By European, he meant to be cosmopolitan – an interest in all nations and cultures of Europe. Goethe spent his middle age in Italy, absorbing the culture of classic Rome and the Renaissance. In his older years, he studied the writers of Persia, India and China. He spoke out against the provincialism expressed by nationalism and pleaded for personal tolerance.